

UNR511xシリーズ (UN511xシリーズ)

シリコンPNPエピタキシャルプレーナ形

デジタル回路用

■ 特 長

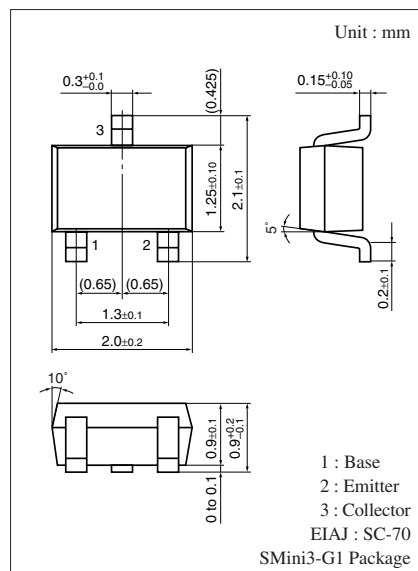
- 機器の小形化, 部品点数の削減によりコストダウン可能
- Sミニ型パッケージのためテーピング, マガジン包装による自動挿入が可能

■ 品種別抵抗値

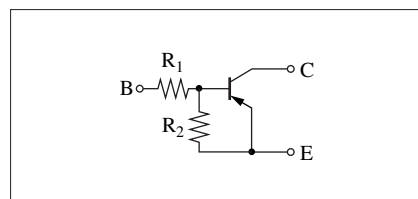
	形名表示記号	(R ₁)	(R ₂)
• UNR5110 (UN5110)	6L	47 kΩ	—
• UNR5111 (UN5111)	6A	10 kΩ	10 kΩ
• UNR5112 (UN5112)	6B	22 kΩ	22 kΩ
• UNR5113 (UN5113)	6C	47 kΩ	47 kΩ
• UNR5114 (UN5114)	6D	10 kΩ	47 kΩ
• UNR5115 (UN5115)	6E	10 kΩ	—
• UNR5116 (UN5116)	6F	4.7 kΩ	—
• UNR5117 (UN5117)	6H	22 kΩ	—
• UNR5118 (UN5118)	6I	0.51 kΩ	5.1 kΩ
• UNR5119 (UN5119)	6K	1 kΩ	10 kΩ
• UNR511D (UN511D)	6M	47 kΩ	10 kΩ
• UNR511E (UN511E)	6N	47 kΩ	22 kΩ
• UNR511F (UN511F)	6O	4.7 kΩ	10 kΩ
• UNR511H (UN511H)	6P	2.2 kΩ	10 kΩ
• UNR511L (UN511L)	6Q	4.7 kΩ	4.7 kΩ
• UNR511M (UN511M)	EI	2.2 kΩ	47 kΩ
• UNR511N (UN511N)	EW	4.7 kΩ	47 kΩ
• UNR511T (UN511T)	EY	22 kΩ	47 kΩ
• UNR511V (UN511V)	FC	2.2 kΩ	2.2 kΩ
• UNR511Z (UN511Z)	FE	4.7 kΩ	22 kΩ

■ 絶対最大定格 T_a = 25°C

項目	記号	定格	単位
コレクタ・ベース間電圧(E開放時)	V _{CBO}	-50	V
コレクタ・エミッタ間電圧(B開放時)	V _{CEO}	-50	V
コレクタ電流	I _C	-100	mA
全許容損失	P _T	150	mW
接合温度	T _j	150	°C
保存温度	T _{stg}	-55 ~ +150	°C



内部接続図



注) 形名の()内は, 従来品番です

■ 電気的特性 $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

項目		記号	条件	最小	標準	最大	単位
コレクタ・ベース間電圧(E開放時)		V _{CBO}	I _C = -10 μA, I _E = 0	-50			V
コレクタ・エミッタ間電圧(B開放時)		V _{CEO}	I _C = -2 mA, I _B = 0	-50			V
コレクタ・ベース間遮断電流(E開放時)		I _{CBO}	V _{CB} = -50 V, I _E = 0			-0.1	μA
コレクタ・エミッタ間遮断電流(B開放時)		I _{CEO}	V _{CE} = -50 V, I _B = 0			-0.5	μA
エミッタ・ ベース間 遮断電流 (C開放時)	UNR5110/5115/5116/5117	I _{EBO}	V _{EB} = -6 V, I _C = 0			-0.01	mA
	UNR5113					-0.1	
	UNR5112/5114/511D/ 511E/511M/511N/511T					-0.2	
	UNR511Z					-0.4	
	UNR5111					-0.5	
	UNR511F/511H					-1.0	
	UNR5119					-1.5	
	UNR5118/511L/511V					-2.0	
直流電流 増幅率	UNR511V	h _{FE}	V _{CE} = -10 V, I _C = -5 mA	6		20	—
	UNR5118/511L			20			
	UNR5119/511D/511F/511H			30			
	UNR5111			35			
	UNR5112/511E			60			
	UNR511Z			60		200	
	UNR5113/5114/511M			80			
	UNR511N/511T			80		400	
	UNR5110*/5115*/5116*/5117*			160		460	
コレクタ・エミッタ間飽和電圧		V _{CE(sat)}	I _C = -10 mA, I _B = -0.3 mA			-0.25	V
UNR511V			I _C = -10 mA, I _B = -1.5 mA				
出力電圧ハイレベル		V _{OH}	V _{CC} = -5 V, V _B = -0.5 V, R _L = 1 kΩ	-4.9			V
出力電圧ローレベル		V _{OL}	V _{CC} = -5 V, V _B = -2.5 V, R _L = 1 kΩ			-0.2	V
UNR5113			V _{CC} = -5 V, V _B = -3.5 V, R _L = 1 kΩ				
UNR511D			V _{CC} = -5 V, V _B = -10 V, R _L = 1 kΩ				
UNR511E			V _{CC} = -5 V, V _B = -6 V, R _L = 1 kΩ				
トランジション周波数		f _T	V _{CB} = -10 V, I _E = 1 mA, f = 200 MHz		80		MHz
UNR5116			V _{CB} = -10 V, I _E = 2 mA, f = 200 MHz		150		
入力抵抗	UNR5118	R ₁		-30%	0.51	+30%	kΩ
	UNR5119				1.0		
	UNR511H/511M/511V				2.2		
	UNR5116/511F/511L 511N/511Z				4.7		
	UNR5111/5114/5115				10		
	UNR5112/5117/511T				22		
	UNR5110/5113/511D/511E				47		
抵抗比率	UNR511M	R ₁ /R ₂			0.047		—
	UNR511N				0.1		
	UNR5118/5119			0.08	0.10	0.12	
	UNR511Z				0.21		

■ 電気的特性 (つづき) $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

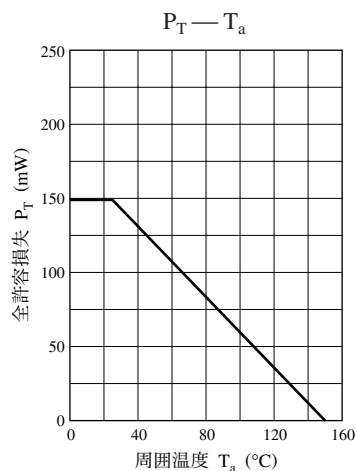
項目	記号	条件	最小	標準	最大	単位
抵抗比率	UNR5114		0.17	0.21	0.25	
	UNR511H		0.17	0.22	0.27	
	UNR511T			0.47		
	UNR511F		0.37	0.47	0.57	
	UNR511V			1.0		
	UNR5111/5112/5113/511L		0.8	1.0	1.2	
	UNR511E		1.70	2.14	2.60	
	UNR511D		3.7	4.7	5.7	

注) 1. 測定方法は、日本工業規格 JIS C 7030 トランジスタ測定方法によります。

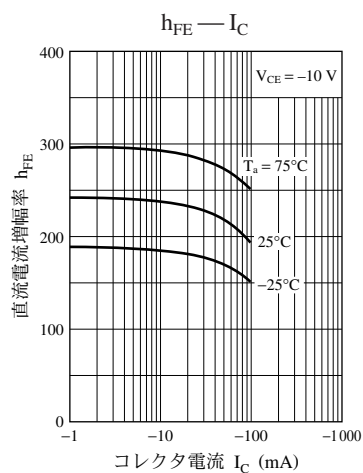
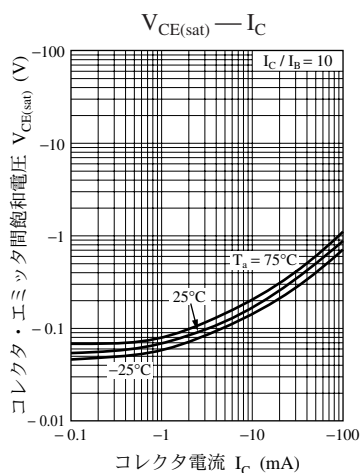
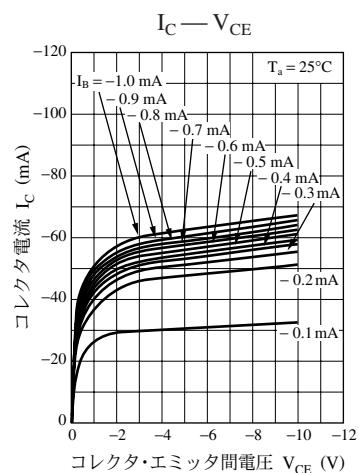
2. *: ランク分類

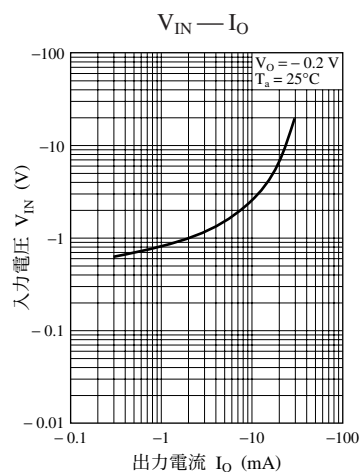
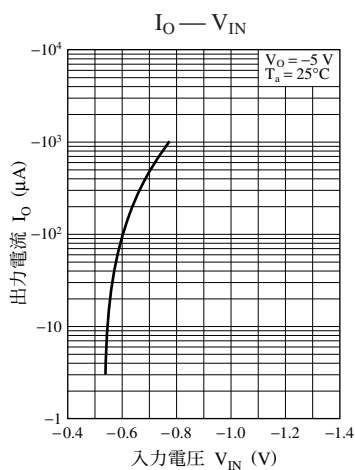
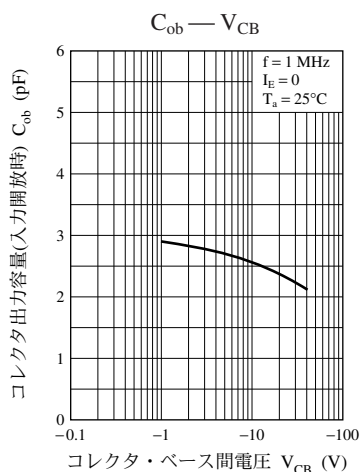
ランク	Q	R	S	ノンランク品
h_{FE}	160 ~ 260	210 ~ 340	290 ~ 460	160 ~ 460

共通特性図

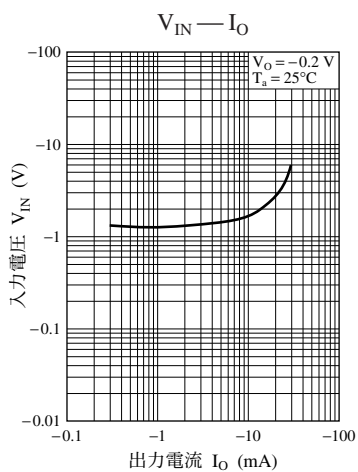
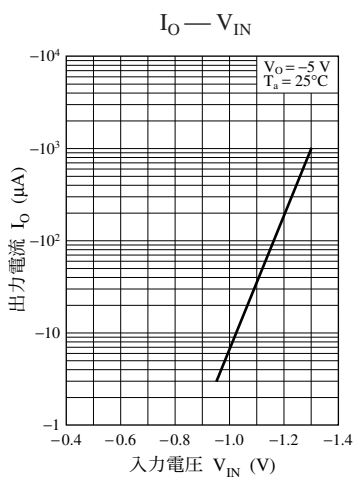
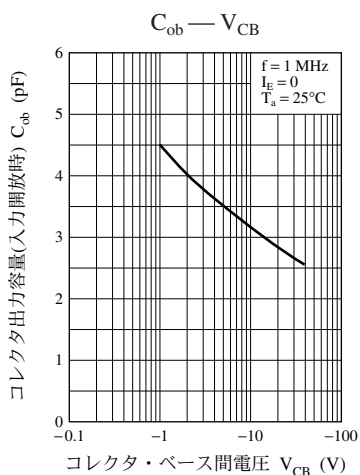
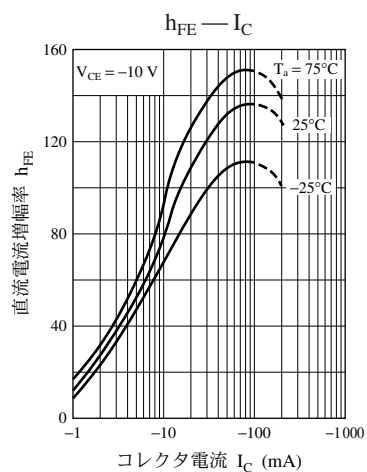
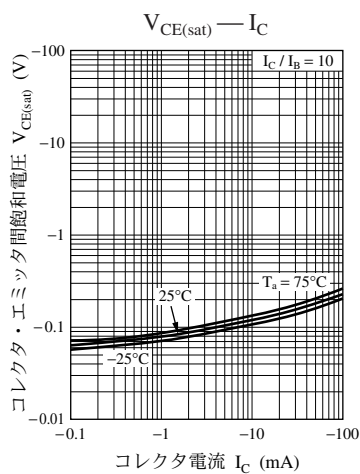
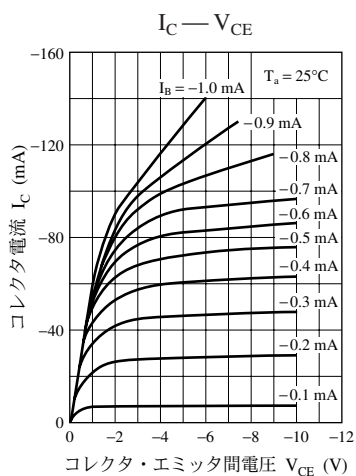


UNR5110 特性図

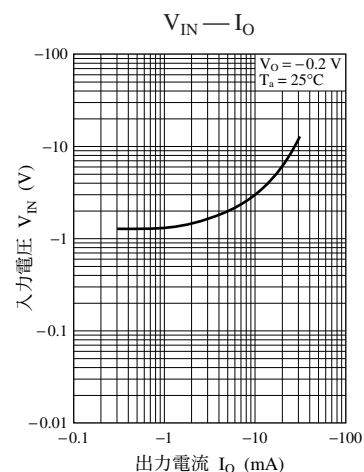
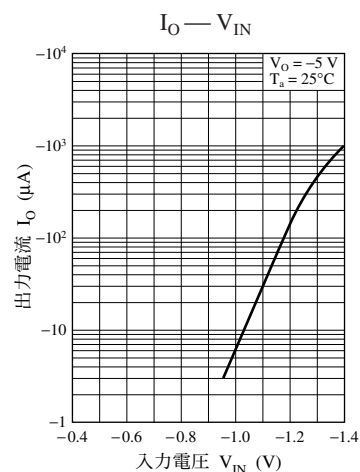
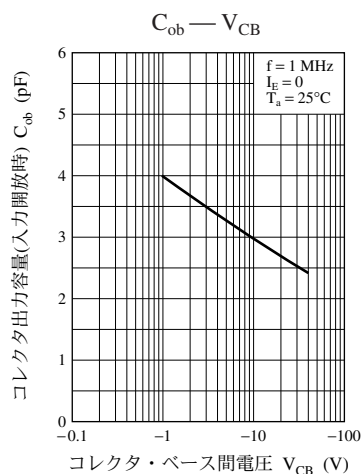
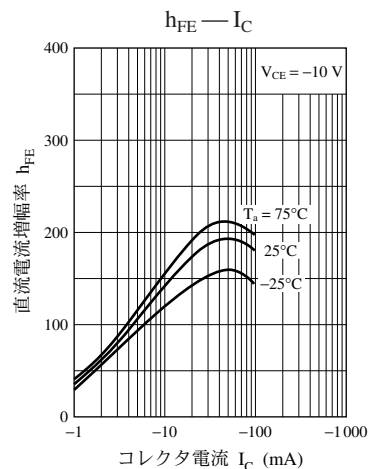
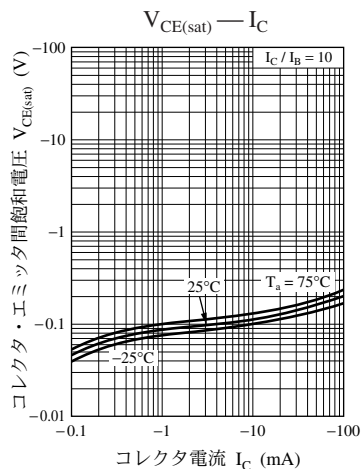
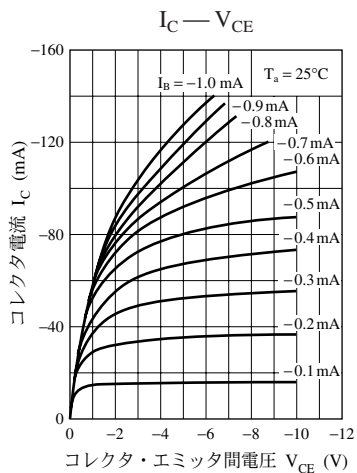




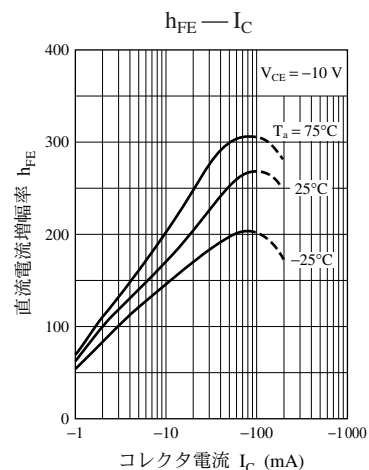
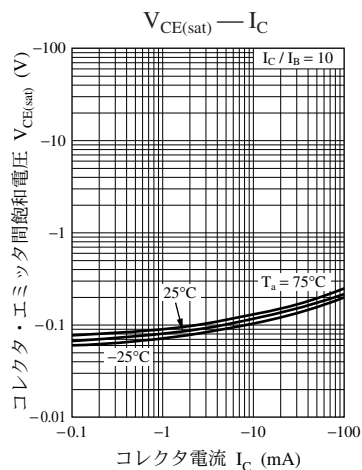
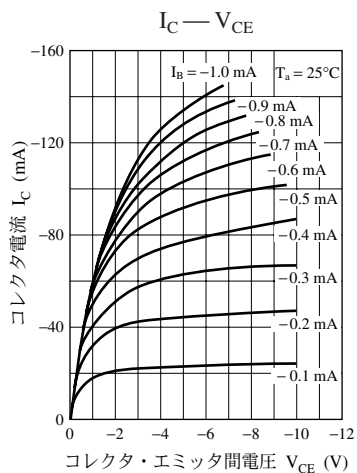
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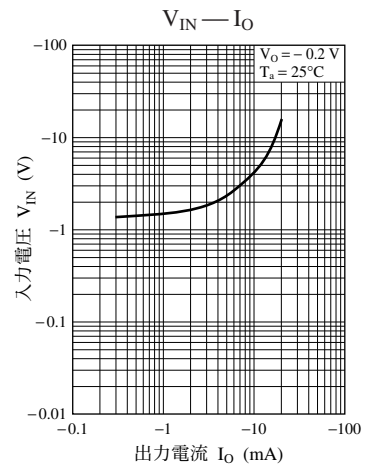
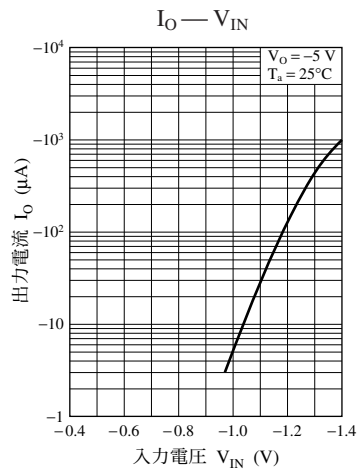
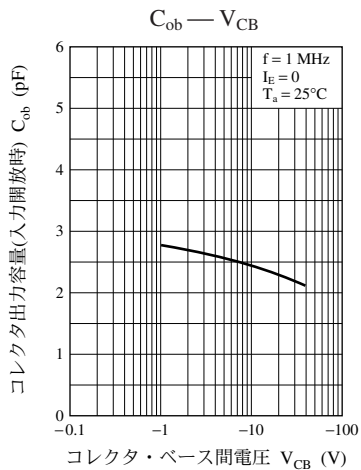


UNR5112 特性図

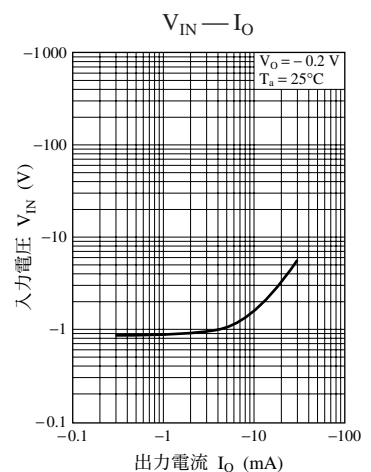
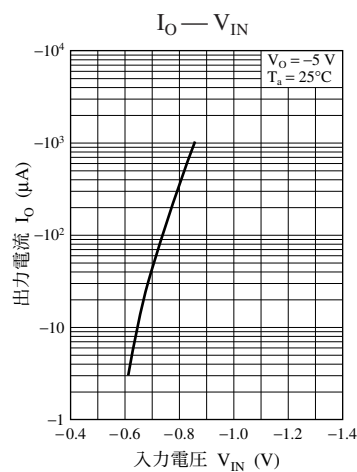
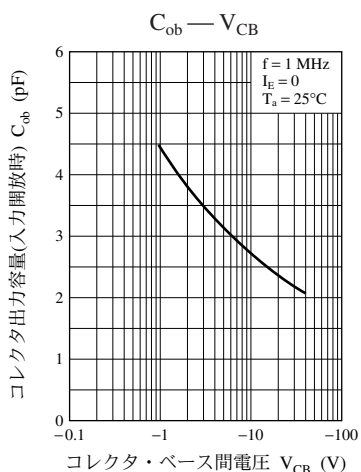
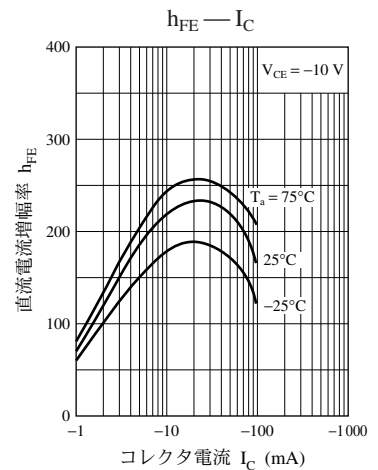
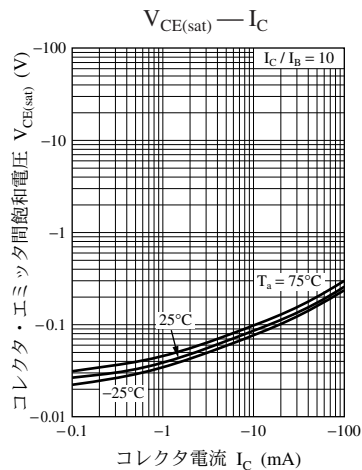
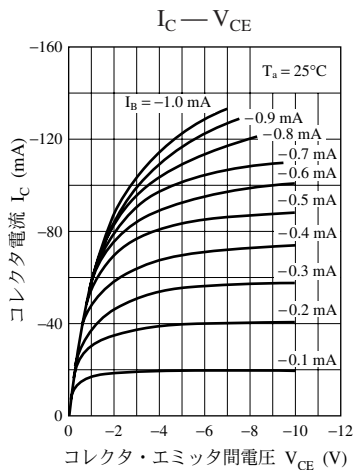


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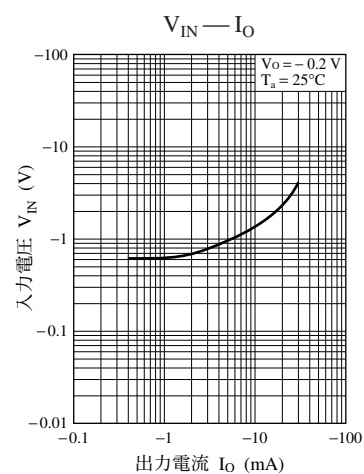
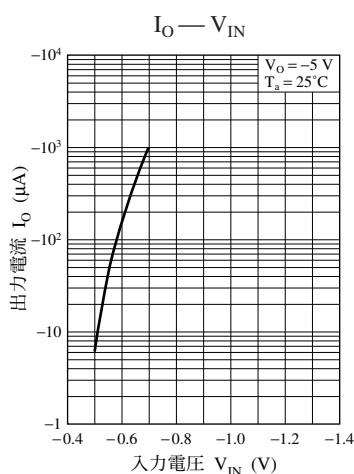
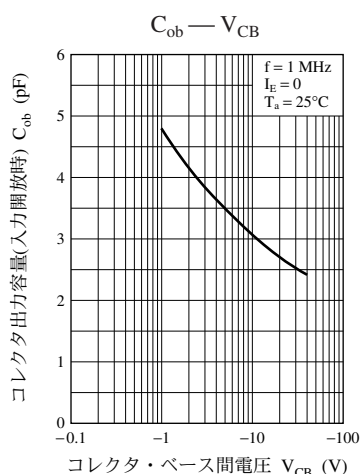
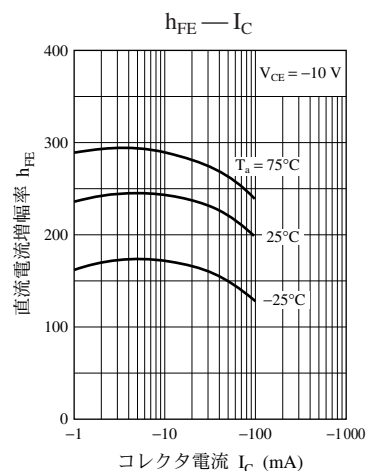
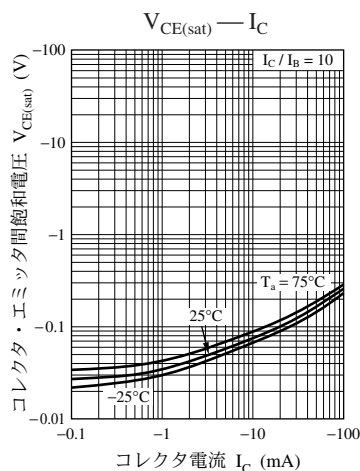
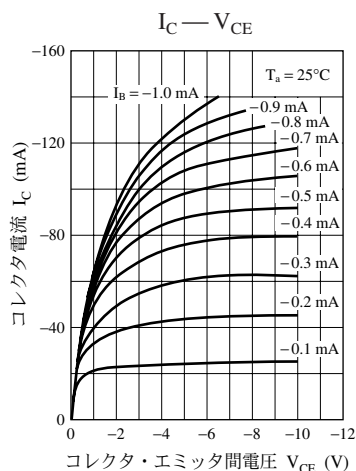




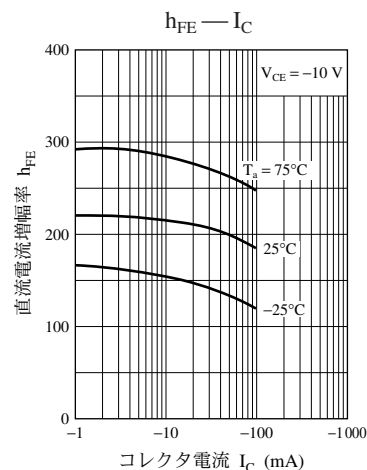
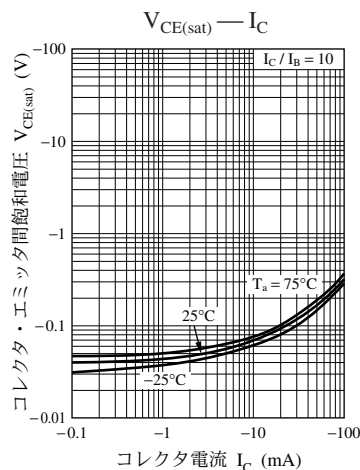
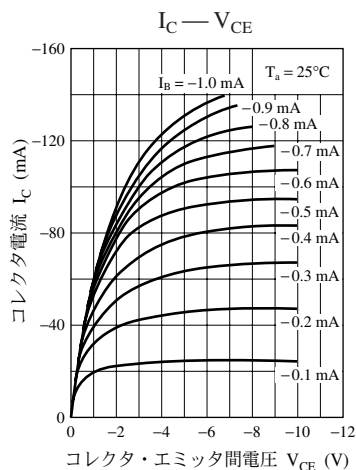
UNR5114特性図

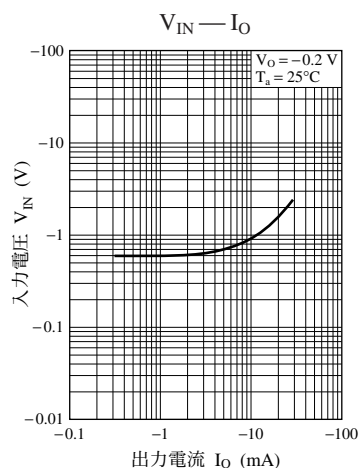
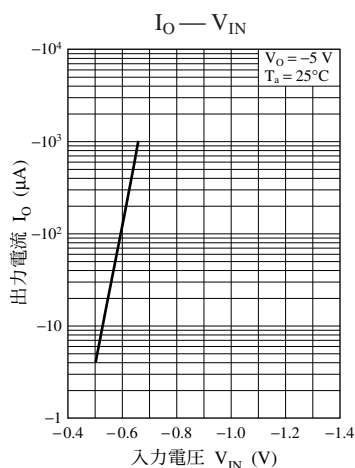
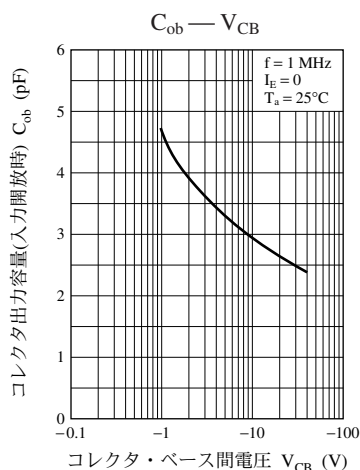


UNR5115 特性図

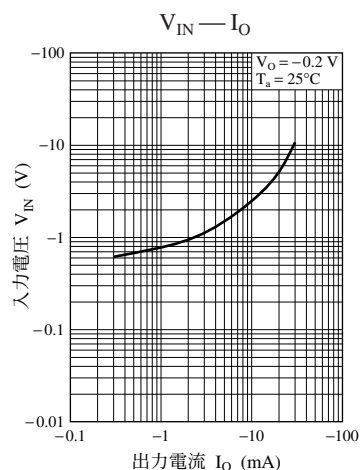
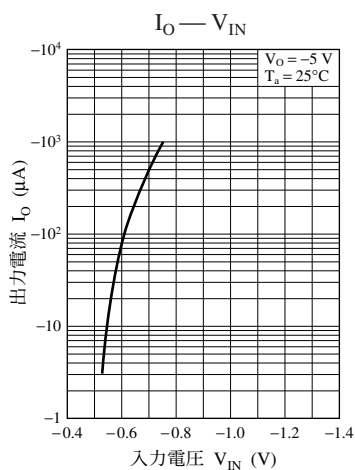
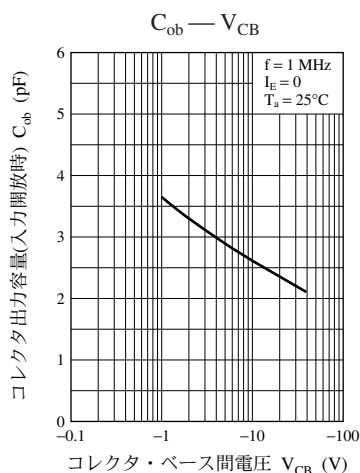
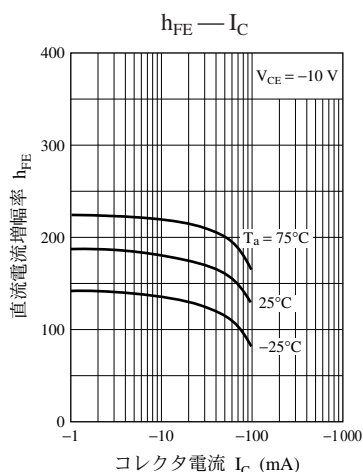
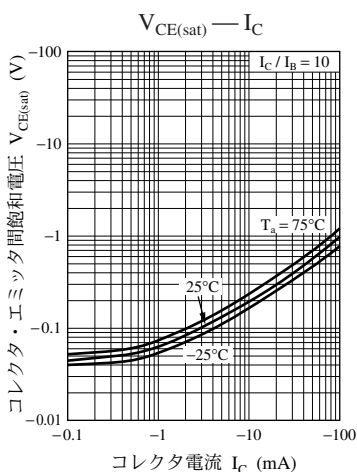
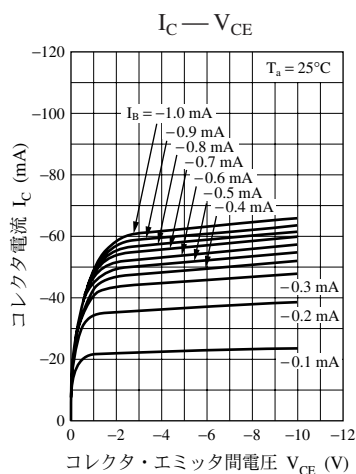


UNR5116 特性図

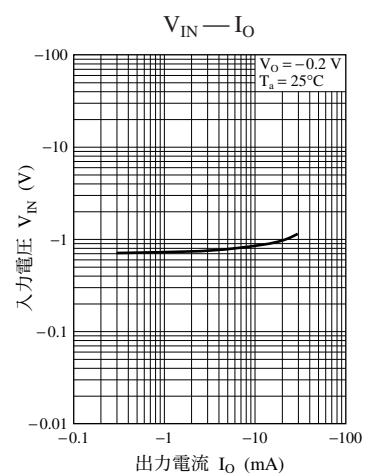
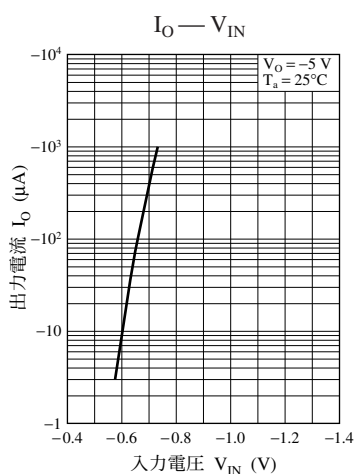
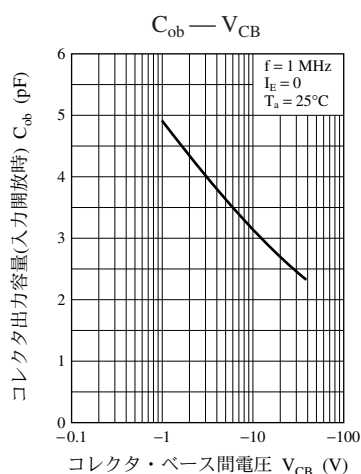
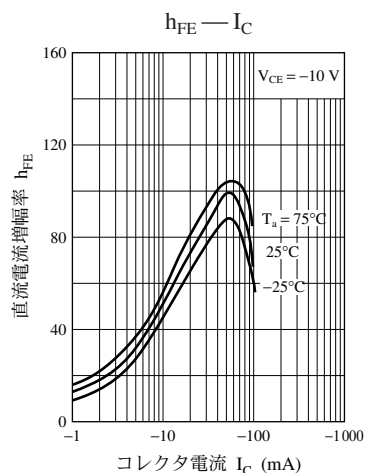
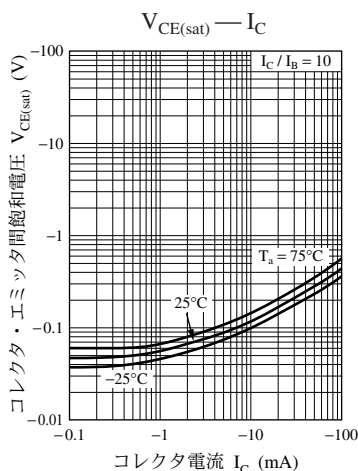
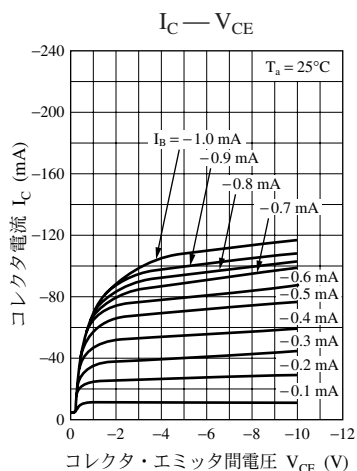




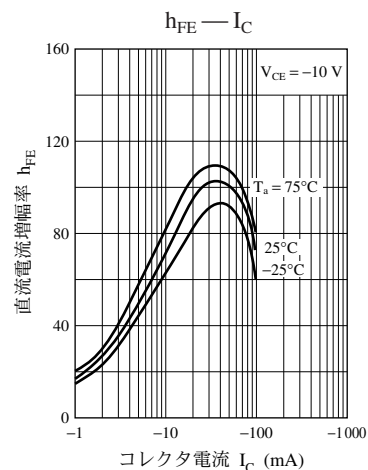
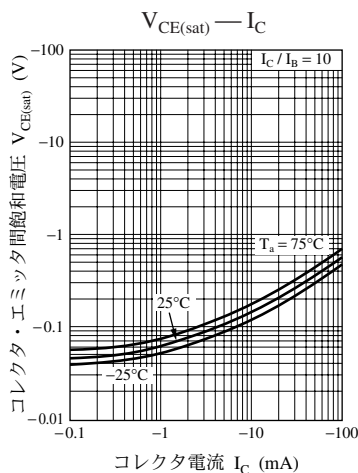
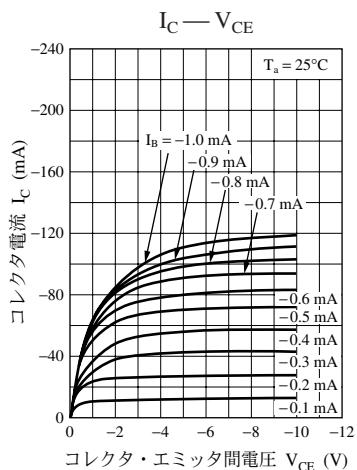
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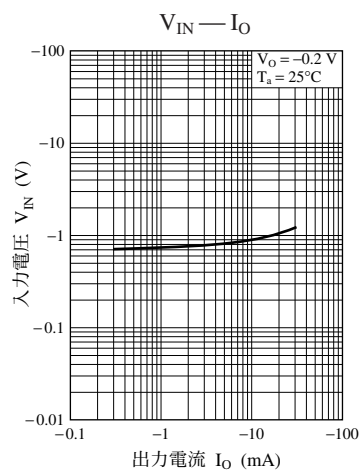
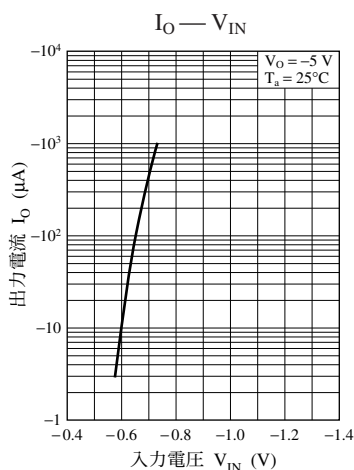
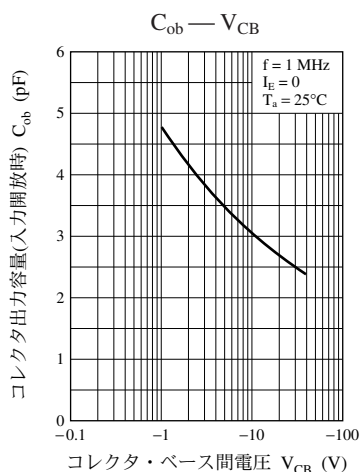


UNR5118 特性図

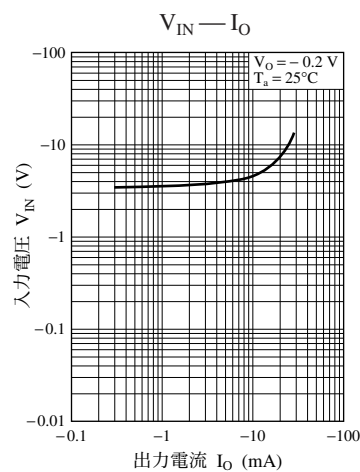
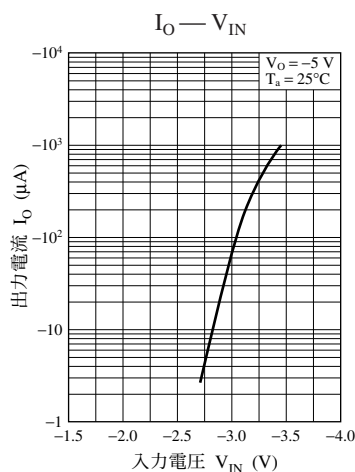
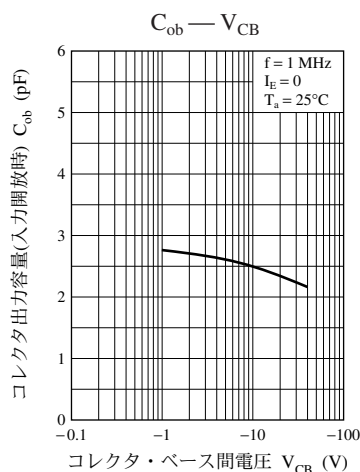
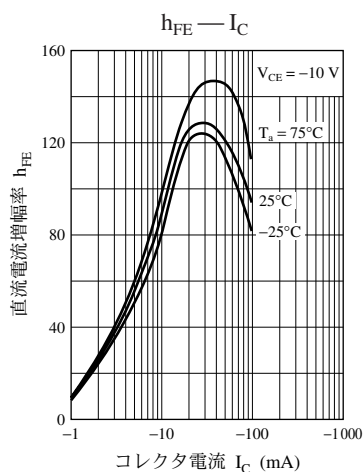
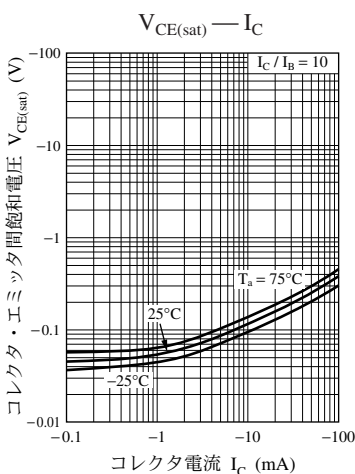
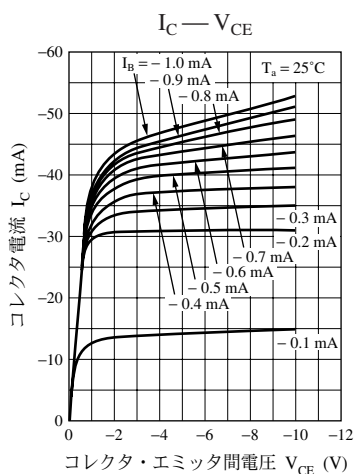


UNR5119 特性図

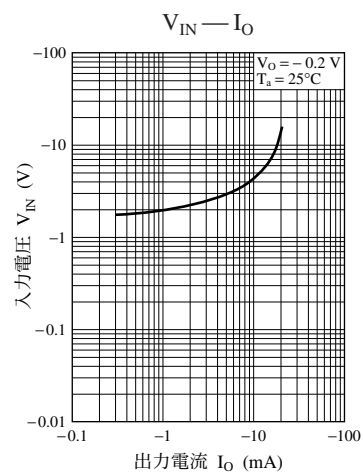
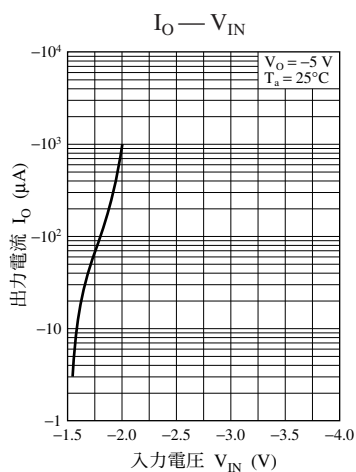
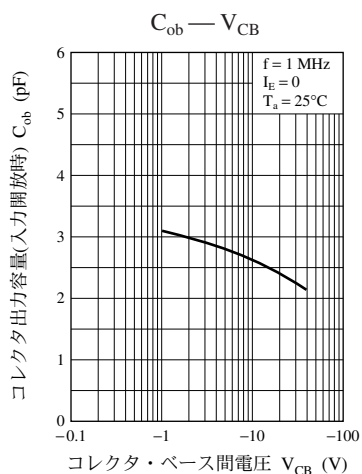
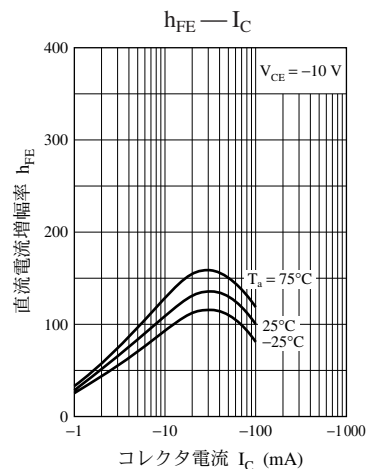
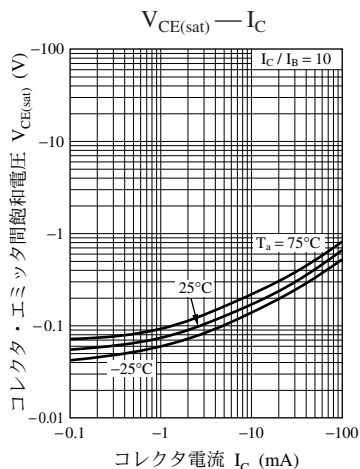
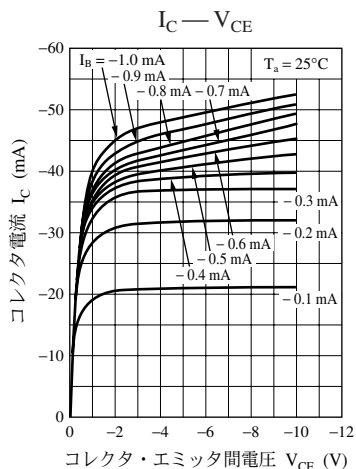




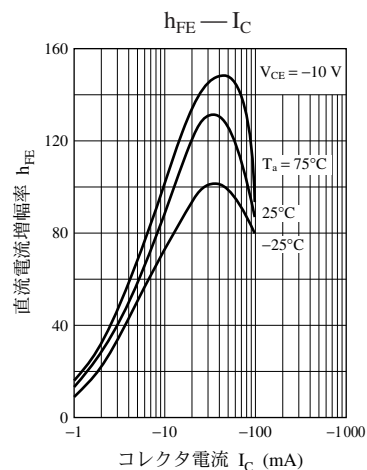
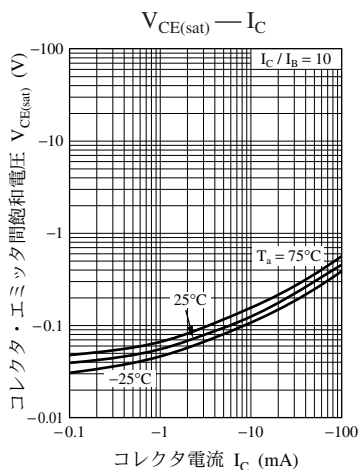
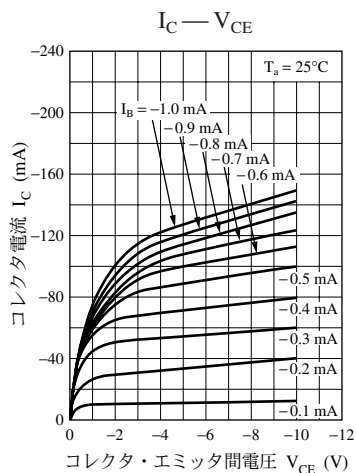
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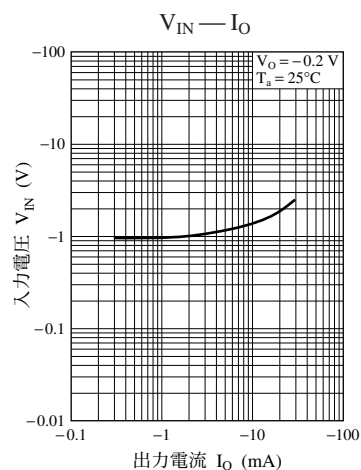
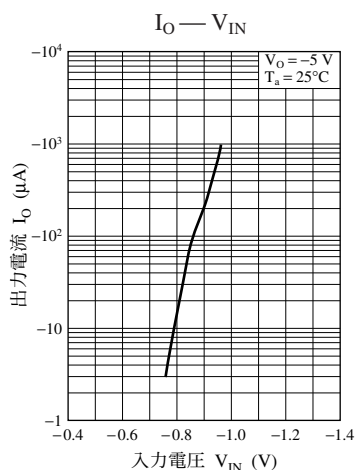
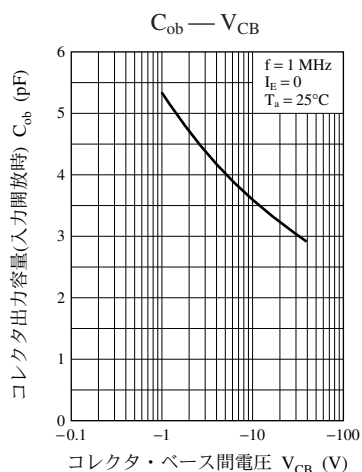


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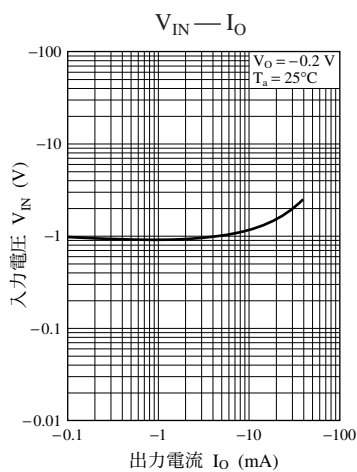
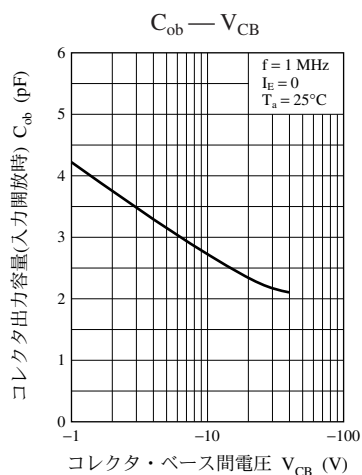
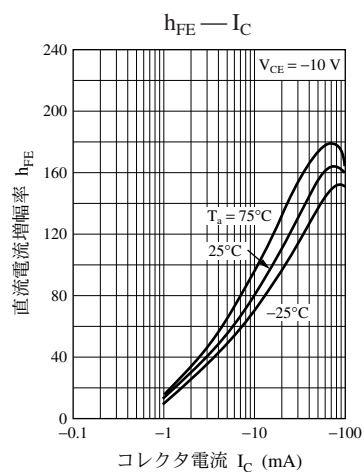
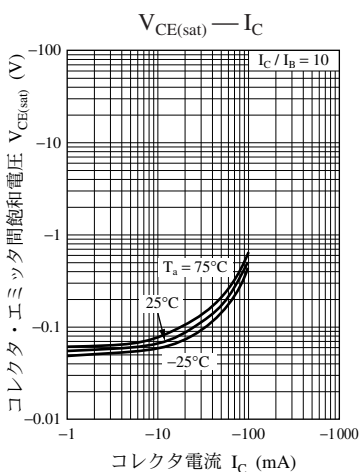
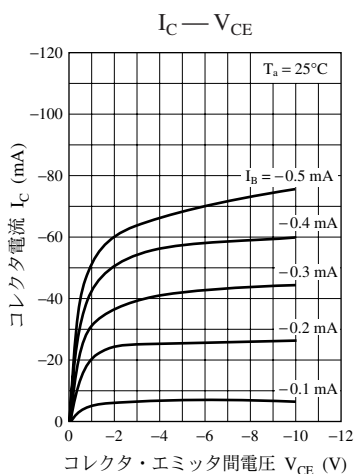


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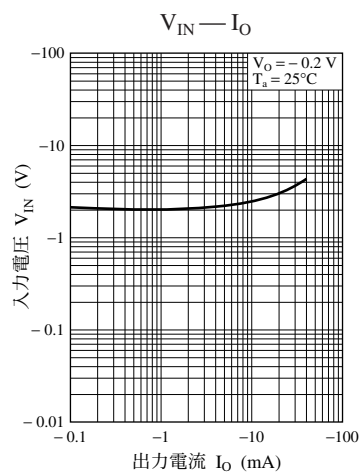
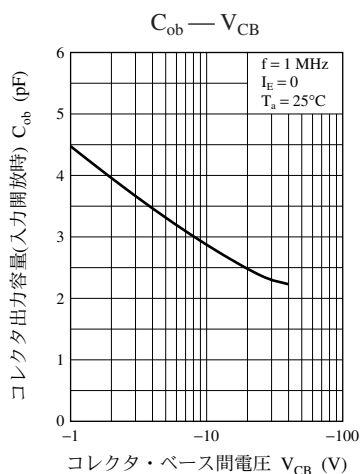
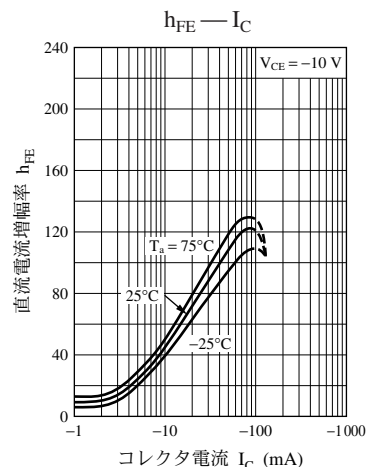
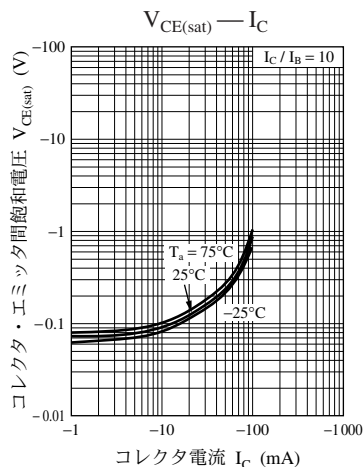
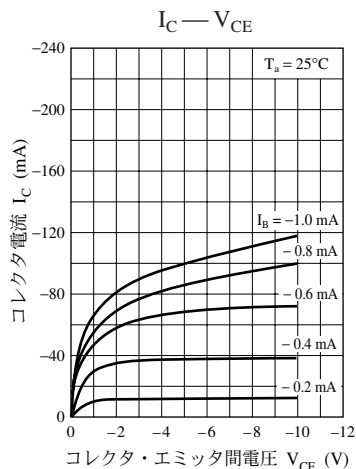




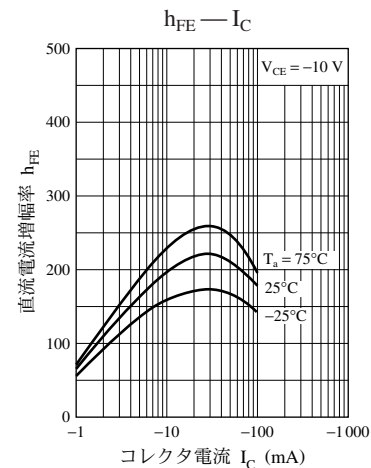
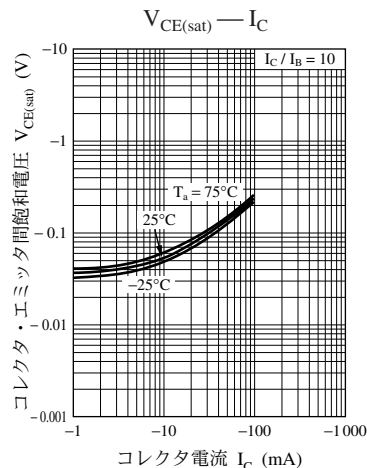
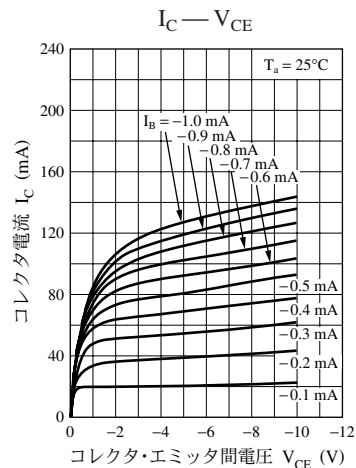
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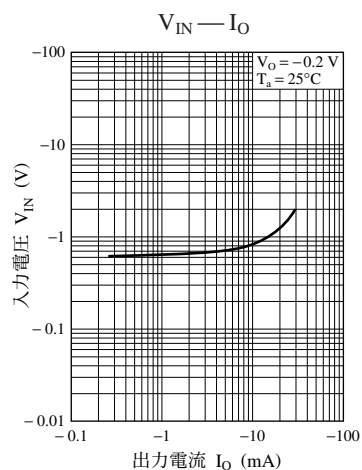
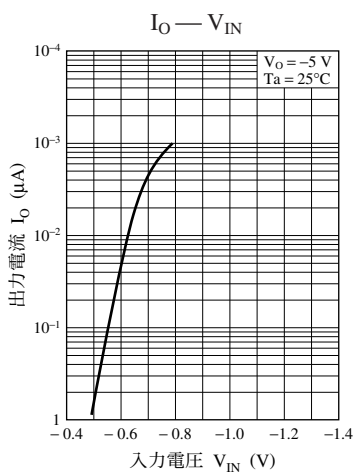
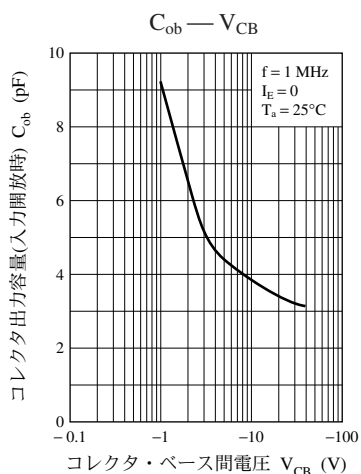


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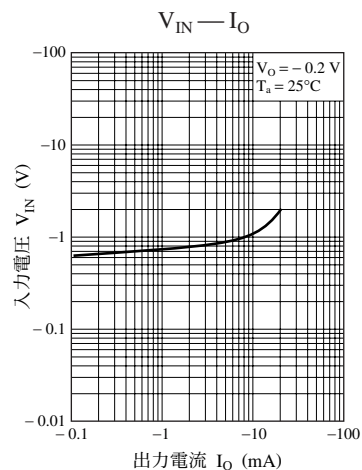
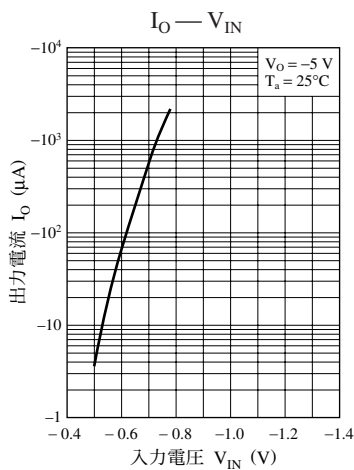
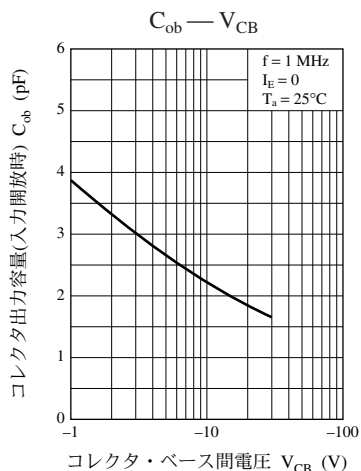
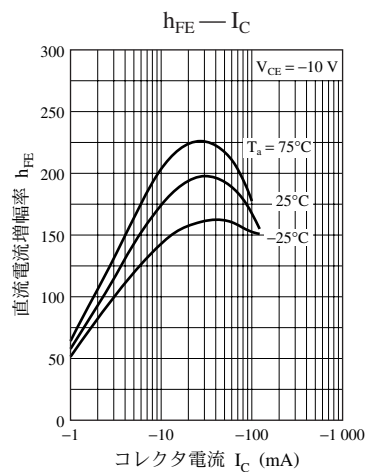
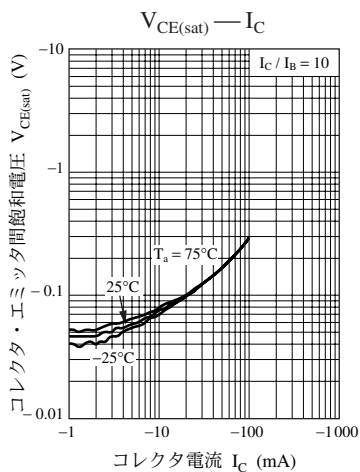
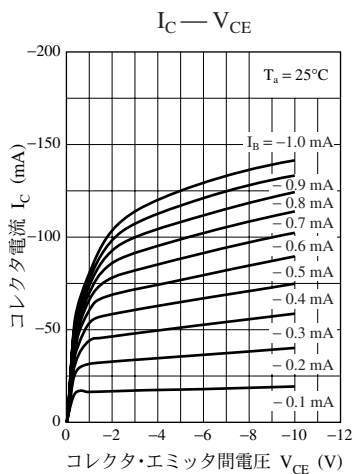


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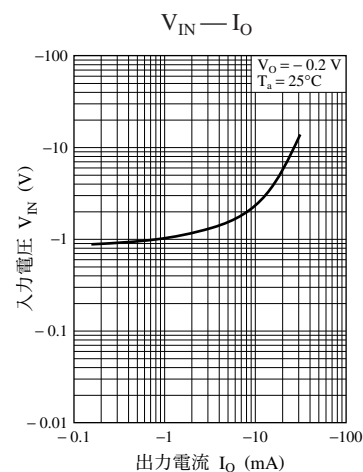
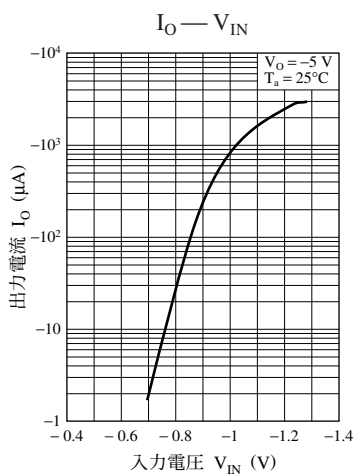
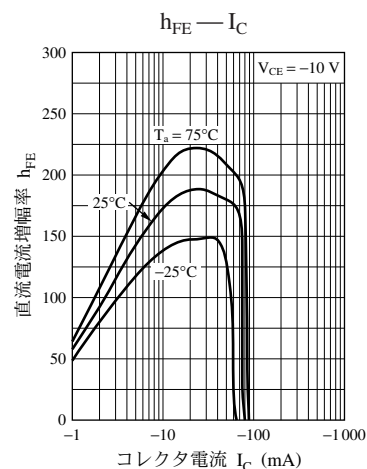
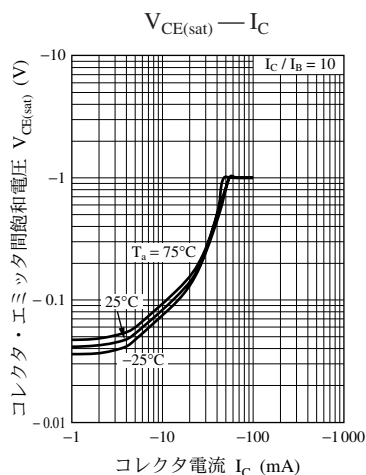
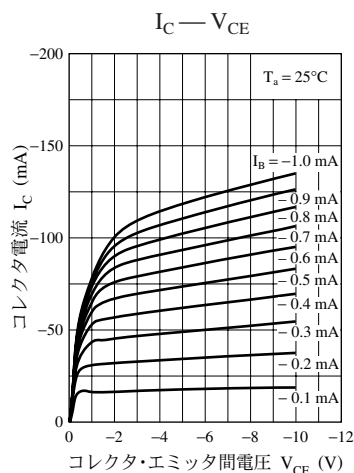




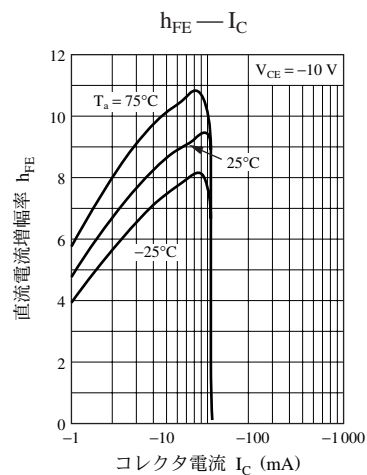
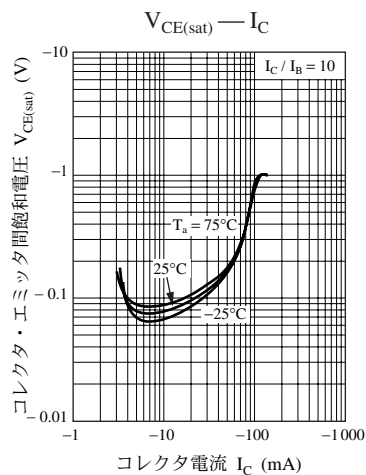
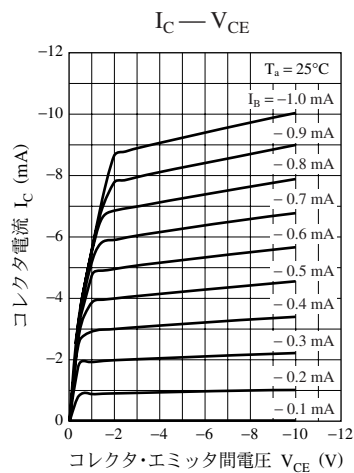
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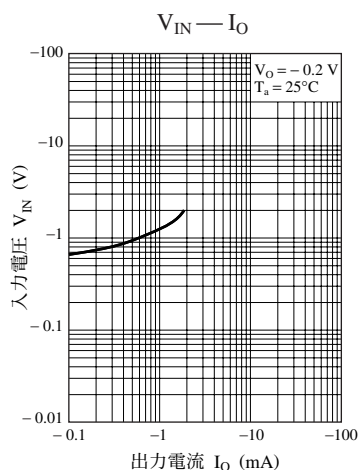
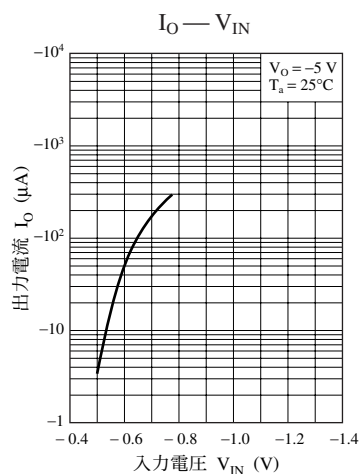


UNR511T 特性図

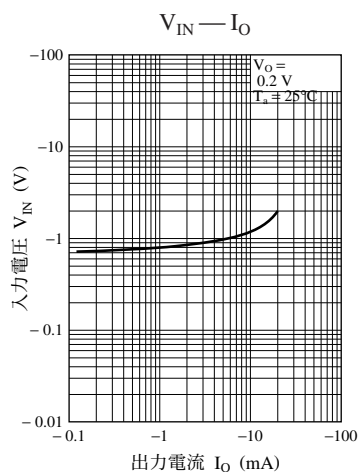
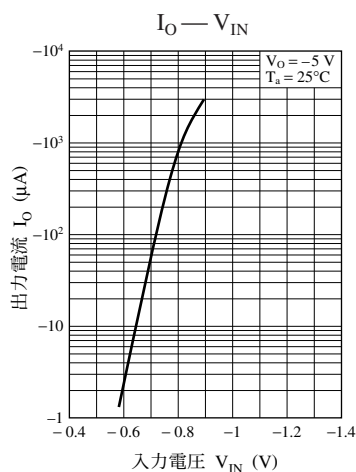
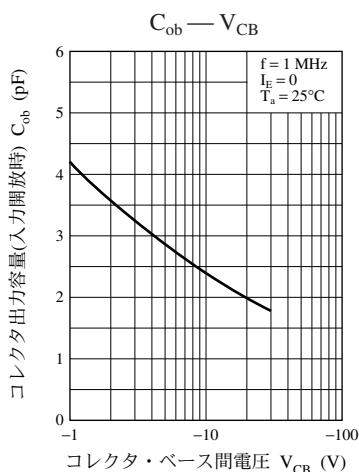
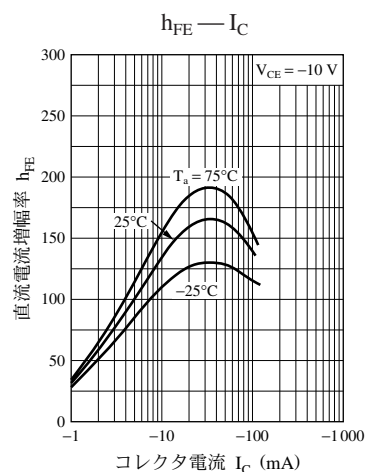
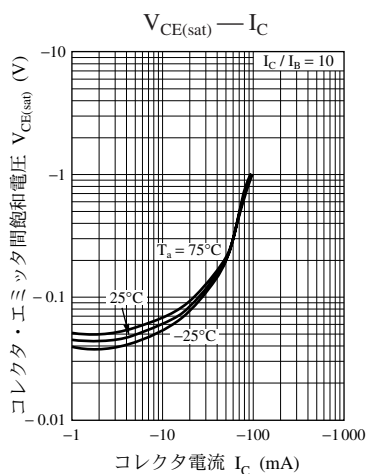
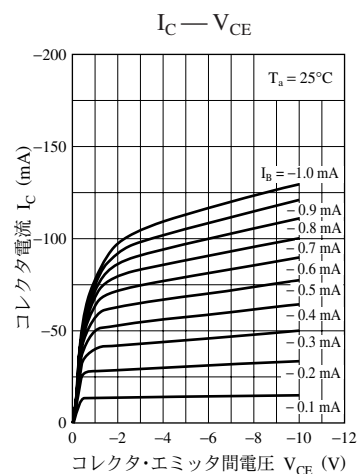


UNR511V 特性図





UNR511Z特性図



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