

2N5336 • 2N5337 • 2N5338 • 2N5339

- $V_{CEO} \dots 80 \text{ V AND } 100 \text{ V (MIN)}$
- $V_{CE(sat)} \dots 1.2 \text{ V (MAX) @ } 5.0 \text{ A}$
- $P_D \dots 6.0 \text{ W @ } T_C = 25^\circ\text{C}$

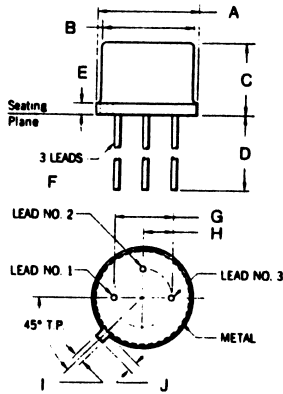
ABSOLUTE MAXIMUM RATINGS (Note 1)

Maximum Temperatures			
Storage Temperature		-65°C to +200°C	
Operating Junction Temperature		200°C	
Maximum Power Dissipation			
Total Dissipation at < 25°C Case Temperature (Note 3)			6.0 W
Maximum Voltages and Currents			
		2N5336	2N5338
		2N5337	2N5339
V_{CBO}	Collector to Base Voltage	80 V	100 V
V_{CEO}	Collector to Emitter Voltage	80 V	100 V
V_{EBO}	Emitter to Base Voltage	6.0 V	6.0 V
I_C	Collector Current	5.0 A	5.0 A
I_B	Base Current	1.0 A	1.0 A

ELECTRICAL CHARACTERISTICS (25°C Case Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	2N5336 2N5337		2N5338 2N5339		UNITS	TEST CONDITIONS
		MIN.	MAX.	MIN.	MAX.		
I_{CEX}	Collector Cutoff Current		10			μA	$V_{CE} = 75 \text{ V}, V_{EB} = 1.5 \text{ V}$ $V_{CE} = 75 \text{ V}, V_{EB} = 1.5 \text{ V}, T_C = 150^\circ\text{C}$
			1.0			mA	
I_{CBO}	Collector Cutoff Current			10		μA	$V_{CE} = 90 \text{ V}, V_{EB} = 1.5 \text{ V}$ $V_{CE} = 90 \text{ V}, V_{EB} = 1.5 \text{ V}, T_C = 150^\circ\text{C}$
				1.0		mA	
I_{EBO}	Emitter Cutoff Current		10			μA	$V_{CB} = 80 \text{ V}, I_E = 0$ $V_{CB} = 100 \text{ V}, I_E = 0$
			100			μA	
$V_{CEO(sus)}$	Collector to Emitter Sustaining Voltage (Note 2)	80		100		μA	$V_{EB} = 6.0 \text{ V}, I_C = 0$
$V_{CE(sat)}$	Pulsed Collector Saturation Voltage (Note 2)		0.7		0.7	V	$I_C = 50 \text{ mA}, I_B = 0$ $I_C = 2.0 \text{ A}, I_B = 200 \text{ mA}$
			1.2		1.2	V	
$V_{BE(sat)}$	Pulsed Base Saturation Voltage (Note 2)		1.2		1.2	V	$I_C = 5.0 \text{ A}, I_B = 500 \text{ mA}$ $I_C = 2.0 \text{ A}, I_B = 200 \text{ mA}$
			1.8		1.8	V	
t_d	Turn On Delay Time		100		100	ns	$V_{CC} = 4.0 \text{ V}, I_C = 2.0 \text{ A}, I_{B1} = 200 \text{ mA}$ $V_{CC} = 40 \text{ V}, I_C = 2.0 \text{ A}, I_{B1} = 200 \text{ mA}$
t_r	Turn On Rise Time		100		100	ns	
t_s	Turn Off Storage Time		2.0		2.0	μs	$V_{CC} = 40 \text{ V}, I_C = 2.0 \text{ A}, I_{B1} = I_{B2} = 200 \text{ mA}$ $V_{CC} = 40 \text{ V}, I_C = 2.0 \text{ A}, I_{B1} = I_{B2} = 200 \text{ mA}$
t_f	Turn Off Fall Time		200		200	ns	

SYMBOL	CHARACTERISTIC	2N5336 2N5338		2N5337 2N5339		TEST CONDITIONS
		MIN.	MAX.	MIN.	MAX.	
h_{FE}	DC Pulse Current Gain (Note 2)	30	120	60	240	$I_C = 500 \text{ mA}, V_{CE} = 2.0 \text{ V}$ $I_C = 2.0 \text{ A}, V_{CE} = 2.0 \text{ V}$ $I_C = 5.0 \text{ A}, V_{CE} = 2.0 \text{ V}$



DIM.	INCHES			MILLIMETERS		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	.335		.370	8.51		9.39
B	.305		.335	7.75		8.51
C	.240		.260	6.10		6.60
D	.500			12.70		
E			.030			0.762
F	.016		.019	0.406		0.483
G		.200			5.08	
H		.100			2.54	
I	.028		.034	0.711		0.864
J	.029		.045	0.737		1.14