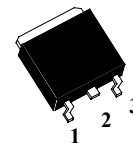


NPN PLASTIC ENCAPSULATE TRANSISTORS

 Lead(Pb)-Free

1.BASE
2.COLLECTOR
3.EMITTER



D-PAK(TO-252)

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Rating	Symbol	Limits	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	6.0	V
Collector Current	I _C	3.0	μA
Collector Power Dissipation	P _D	1.0	W
Junction Temperature	T _j	-55 to +150	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage I _C =10μA	BV _{CBO}	60	-	-	V
Collector-Emitter Breakdown Voltage I _C =1.0mA	BV _{CEO}	50	-	-	V
Emitter-Base Breakdown Voltage I _E =10μA	BV _{EBO}	6.0	-	-	V
Collector Cutoff Current V _{CB} =40V	I _{CBO}	-	-	1.0	μA
Collector Cutoff Current V _{EB} =4.0V	I _{EBO}	-	-	1.0	μA

ON CHARACTERISTICS

DC Current Gain $V_{CE}=2V, I_C=0.1A$ $V_{CE}=2V, I_C=3.0A$	$h_{FE(1)}$ $h_{FE(2)}$	100 35	- -	560 -	- -
Collector-Emitter Saturation Voltage $I_C=2A, I_B=0.1A$	$V_{CE(sat)}$	-	-	0.5	V
Base-Emitter Saturation Voltage $I_C=2A, I_B=0.1A$	$V_{BE(sat)}$	-	-	1.2	V

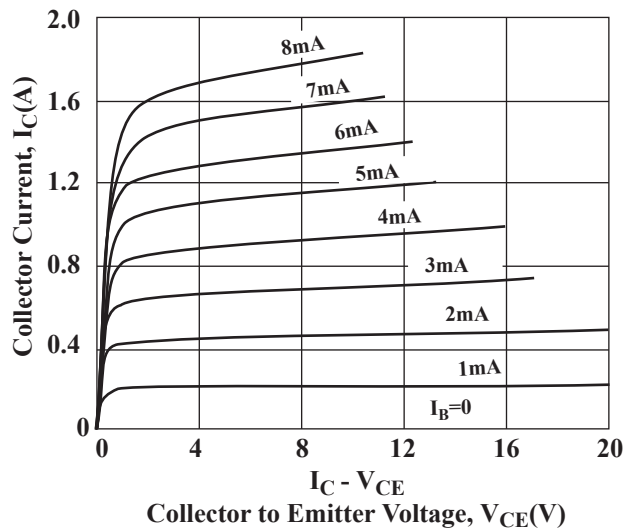
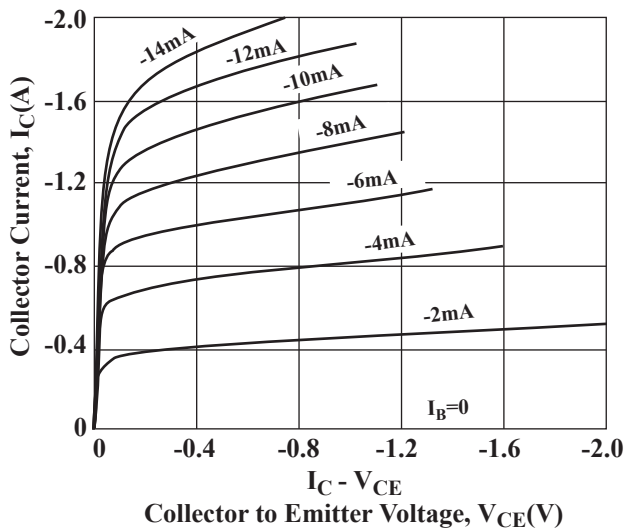
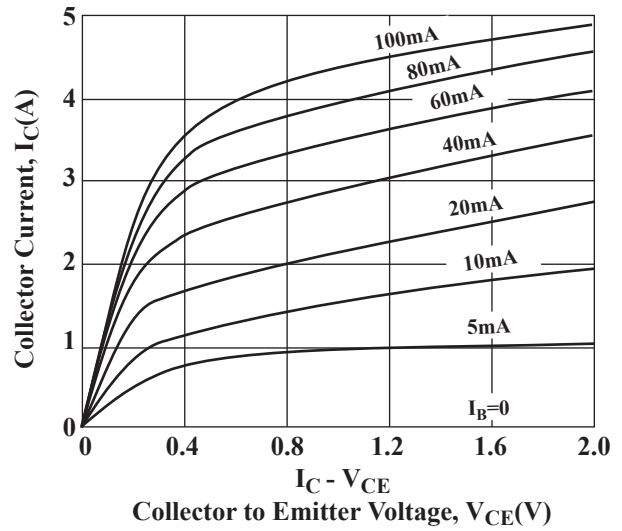
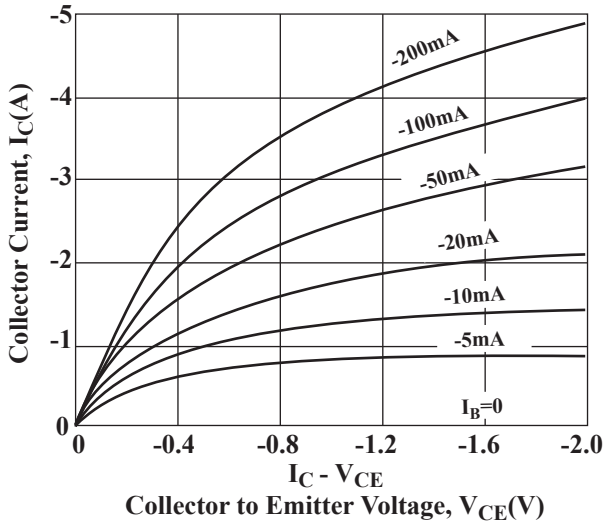
DYNAMIC CHARACTERISTICS

Transition Frequency $V_{CE}=10V, I_C=50mA$	f_T	-	150	-	MHz
Output Capacitance $V_{CB}=10V, I_E=0, f=1.0MHz$	C_{ob}	-	25	-	pF
Turn-off time $V_{CC}=25V, I_C=1A, I_{B1}=-I_{B2}=0.1A$	t_{on}	-	70	-	nS
Fall time $V_{CC}=25V, I_C=1A, I_{B1}=-I_{B2}=0.1A$	t_f	-	650	-	
Storage time $V_{CC}=25V, I_C=1A, I_{B1}=-I_{B2}=0.1A$	t_s	-	35	-	

CLASSIFICATION OF $h_{FE(1)}$

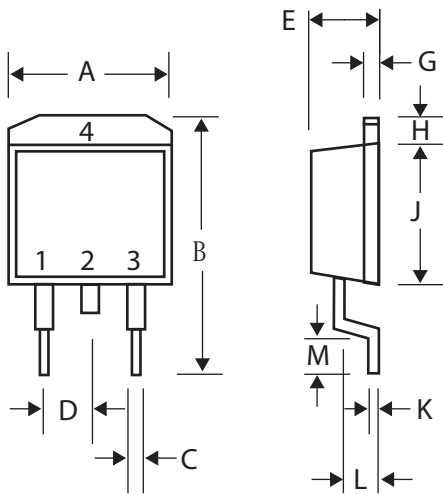
Rank	R	S	T	U
Range	100 - 200	140 - 280	200 - 400	280 - 560

Typical Characteristics



TO-252 Outline Dimensions

unit:mm



TO-252		
Dim	Min	Max
A	6.40	6.80
B	9.00	10.00
C	0.50	0.80
D	-	2.30
E	2.20	2.50
G	0.45	0.55
H	1.00	1.60
J	5.40	5.80
K	0.30	0.64
L	0.70	1.70
M	0.90	1.50