

Features

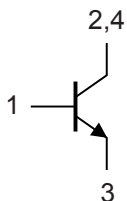
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 100°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	6	V
Continuous Collector Current	I_C	3	A
Power Dissipation	P_D	1.25	W

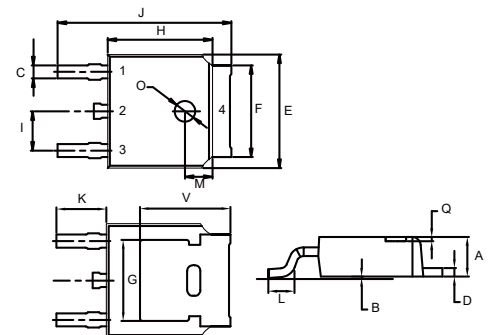
Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

**NPN Silicon
Plastic-Encapsulate
Transistor**

DPAK(TO-252)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		TYP.
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		TYP.
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		TYP.
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		TYP.

Electrical Characteristics @ $T_A=25^\circ\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40			V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_C=10\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6			V	$I_E=100\mu\text{A}, I_C=0$
Collector-Base Cutoff Current	I_{CBO}			1	μA	$V_{CB}=40\text{V}, I_E=0$
Collector-Base Cutoff Current	I_{CEO}			10	μA	$V_{CE}=30\text{V}, I_B=0$
Emitter-Base Cutoff Current	I_{EBO}			1	μA	$V_{EB}=6\text{V}, I_C=0$
DC Current Gain	h_{FE}	60		400		$V_{CE}=2\text{V}, I_C=1\text{A}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C=2\text{A}, I_B=0.2\text{A}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.5	V	$I_C=2\text{A}, I_B=0.2\text{A}$
Transition Frequency	f_T		90		MHZ	$V_{CE}=5\text{V}, I_C=0.1\text{A}, f=10\text{MHz}$

Classification of h_{FE}

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

Curve Characteristics

Fig. 1 - Static Characteristics

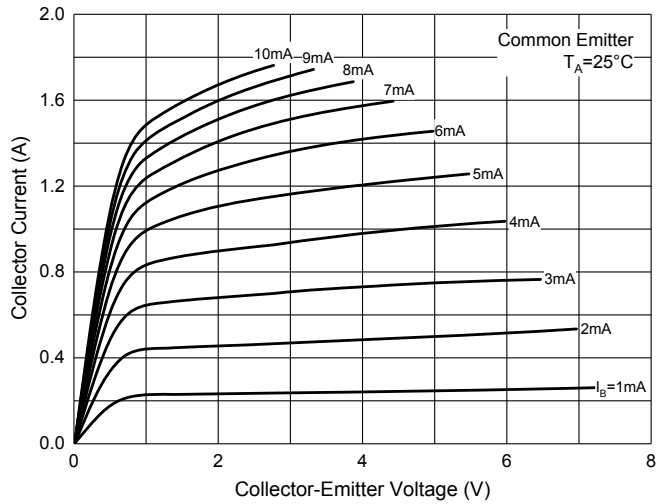


Fig. 2 - DC Current Gain Characteristics

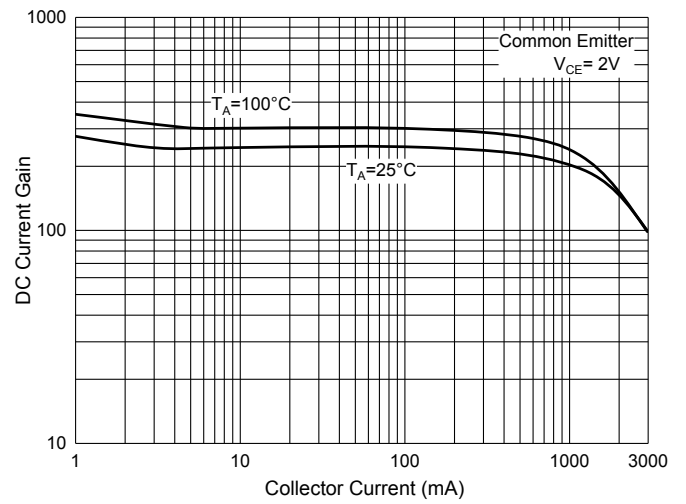


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

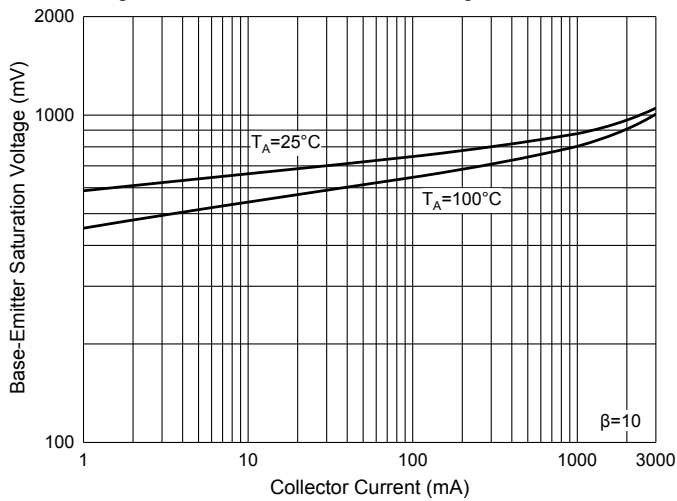


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

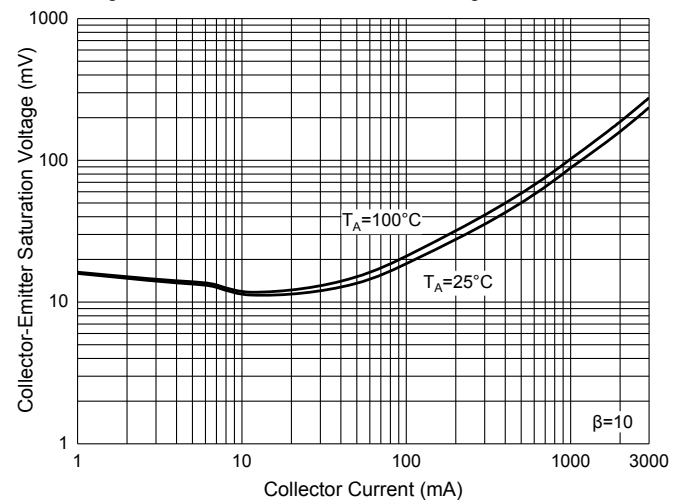


Fig. 5 - Base-Emitter Voltage Characteristics

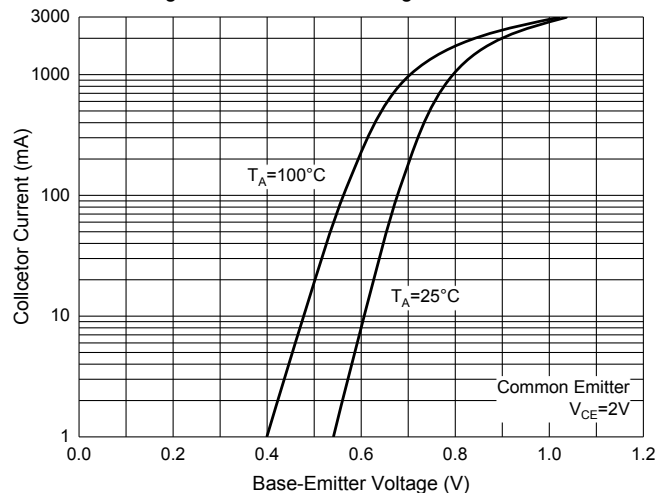
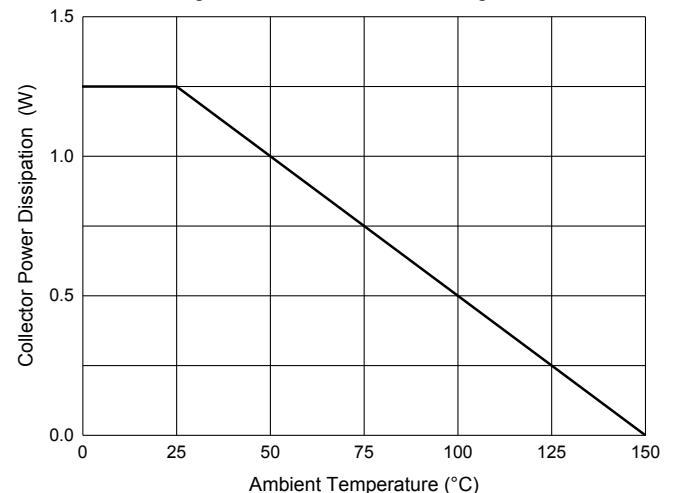


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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