NPN Plastic Medium-Power Silicon Transistors

Features

- Low Collector-Emitter Saturation Voltage
- High DC Current Gain
- Monolithic Construction with Built-in Base-Emitter Shunt Resistors
- 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 (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

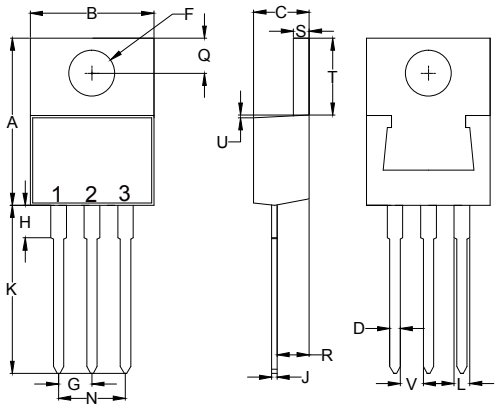
Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55℃ to +150℃
- Storage Temperature Range: -55℃ to +150℃
- Thermal Resistance: 1.56℃/W Junction to Case

Parameter		Symbol	Rating	Unit
Collector-Base Voltage	TIP100	V_{CBO}	60	V
	TIP101		80	
	TIP102		100	
Collector-Emitter Voltage	TIP100	V_{CEO}	60	V
	TIP101		80	
	TIP102		100	
Emitter-Base Voltage		V_{EBO}	5	V
Continuous Collector Current		I_C	8	A
Peak Collector Current		I_{CM}	15	A
Base Current		I_B	1	A
Power Dissipation @T_C=25°C		P_D	80	W

Note: 1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

TO-220



1.BASE
2.COLLECTOR
3.EMITTER

DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.420	9.65	10.67	
C	0.140	0.190	3.56	4.82	
D	0.020	0.045	0.51	1.14	
F	0.139	0.161	3.53	4.09	Φ
G	0.090	0.110	2.29	2.79	
H	-----	0.250	-----	6.35	
J	0.012	0.025	0.30	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.190	0.210	4.83	5.33	
Q	0.100	0.135	2.54	3.43	
R	0.080	0.115	2.04	2.92	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	-----	0.050	-----	1.27	
V	0.045	-----	1.15	-----	

Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter		Symbol	Min	Typ	Max	Units	Conditions
Collector-Emitter Breakdown Voltage	TIP100	$V_{(BR)CEO}$	60			V	I_C=30mA, I_B=0
	TIP101		80				
	TIP102		100				
Collector Cutoff Current	TIP100	I_{CBO}			50	μA	V_{CB}=60V, I_E=0
	TIP101				50	μA	V_{CB}=80V, I_E=0
	TIP102				50	μA	V_{CB}=100V, I_E=0
Collector Cutoff Current	TIP100	I_{CEO}			50	μA	V_{CE}=30V, I_B=0
	TIP101				50	μA	V_{CE}=40V, I_B=0
	TIP102				50	μA	V_{CE}=50V, I_B=0
Emitter Cutoff Current		I_{EBO}			8	mA	V_{EB}=5V, I_C=0
DC Current Gain		$h_{FE(1)}$	1000		20000		V_{CE}=4V, I_C=3A
		$h_{FE(2)}$	200				V_{CE}=4V, I_C=8A
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$			2.0	V	I_C=3A, I_B=6mA
					2.5	V	I_C=8A, I_B=80mA
Base-Emitter On Voltage		$V_{BE(on)}$			2.8	V	V_{CE}=4V, I_C=8A
Small-Signal Current Gain		h_{fe}	4				I_C=3.0A, V_{CE}=4.0V, f=1.0MHz
Output Capacitance		C_{ob}			200	pF	V_{CB}=10V, I_E=0, f=0.1MHz

Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Tube,1Kpcs/Box,5Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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