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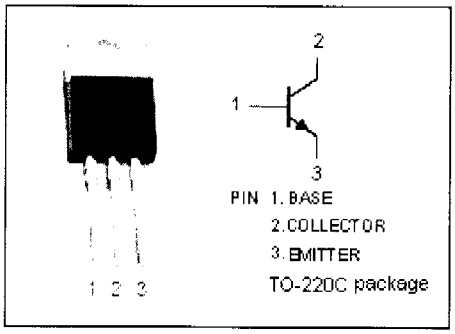
Silicon NPN Power Transistor

2SC3148

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 800V(Min)
- Fast Switching Speed
- Wide Area of Safe Operation

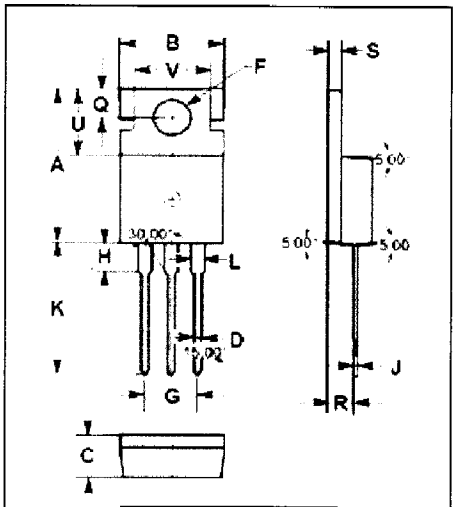


APPLICATIONS

- Switching regulator and high voltage switching applications
- High speed DC-DC converter applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	900	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	5	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_a=25℃	1.5	W
	Collector Power Dissipation @ T_C=25℃	40	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 10mA; I_B= 0	800			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	900			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 0.8A; I_B= 0.16A			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 0.8A; I_B= 0.16A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 800V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			1.0	mA
h_{FE}	DC Current Gain	I_C= 0.8A; V_{CE}= 5V	10			

Switching times

t_r	Rise Time	I_{B1}= 80mA; I_{B2}= -0.2A; R_L= 50Ω; V_{CC}≈ 400V			1.0	μs
t_{stg}	Storage Time				4.0	μs
t_f	Fall Time				1.0	μs