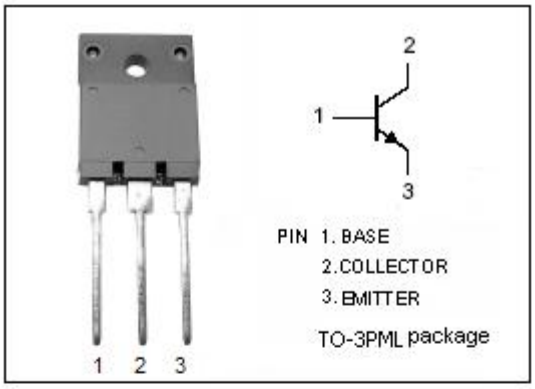
isc Silicon NPN Power Transistor — 2SC3843

DESCRIPTION

- High Breakdown Voltage
- High Switching Speed
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

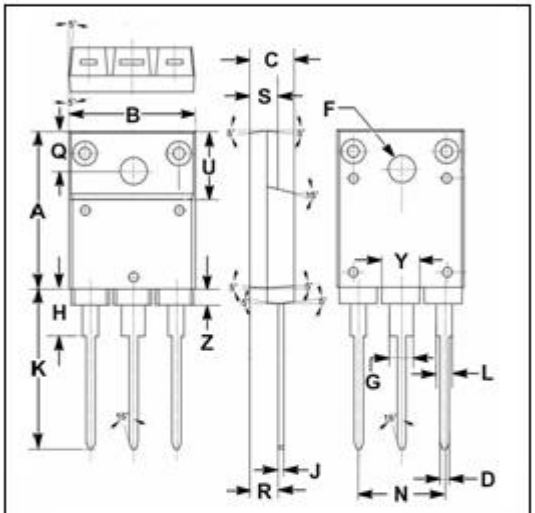


APPLICATIONS

- Designed for silicon high speed transistor

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current- Continuous	10	A
I_{CM}	Collector Current- Peak	20	A
P_C	Collector Power Dissipation @ T_C=25℃	75	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	19.90	20.10
B	15.90	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.10
H	5.90	6.10
J	0.595	0.605
K	22.30	22.50
L	1.90	2.10
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.40
U	9.90	10.10
Y	4.70	4.90
Z	1.90	2.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 6A; I_B= 1.2A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 6A; I_B= 1.2A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			100	uA
h_{FE}	DC Current Gain	I_C= 6A; V_{CE}= 5V	10		30	
f_T	Current-Gain—Bandwidth Product	I_E= 2A ; V_{CE}= 10V		28		MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V;f_{test}= 1.0MHz		230		pF
Switching times						
t_{on}	Turn-on Time	I_C= 6A ;I_{B1}=1.2A; I_{B2}= -1.2A V_{CC}=150V			0.3	μs
t_{stg}	Storage Time				1.5	μs
t_f	Fall Time				0.2	μs