

isc Silicon NPN Power Transistor

2SC3843

DESCRIPTION

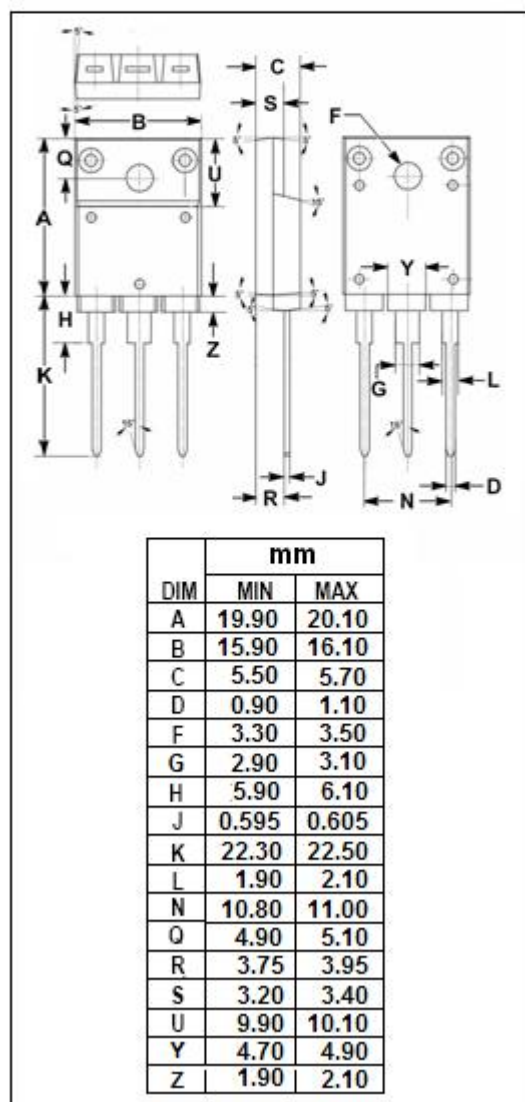
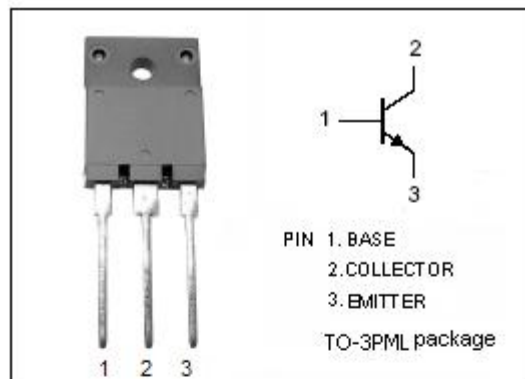
- High Breakdown Voltage
- High Switching Speed
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for silicon high speed transistor

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

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 @ $T_C=25^{\circ}\text{C}$	75	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C 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	μ A
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	μ s
t _{stg}	Storage Time				1.5	μ s
t _f	Fall Time				0.2	μ s

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