

isc Silicon NPN Power Transistor
2SC4758
DESCRIPTION

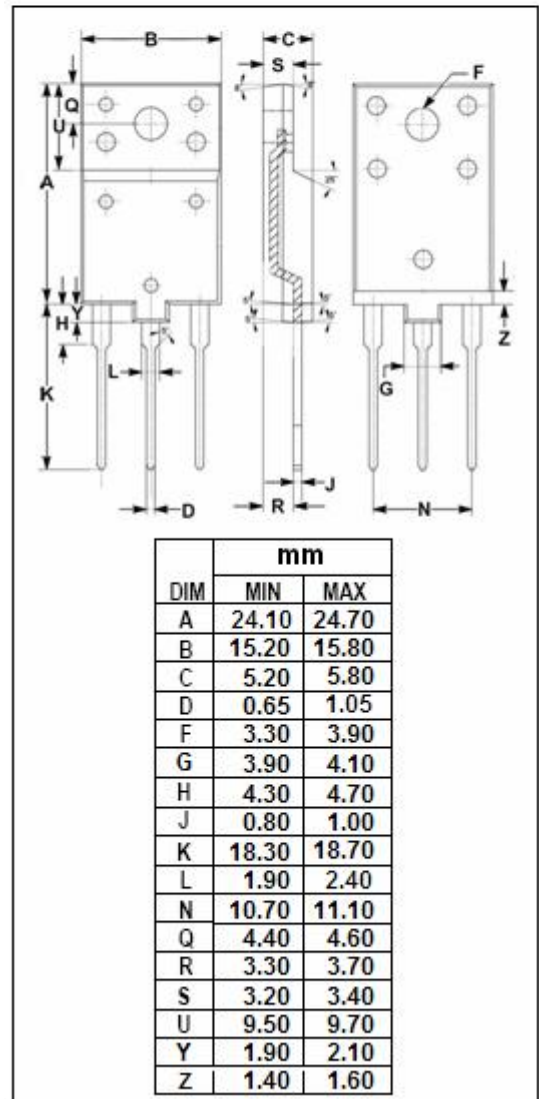
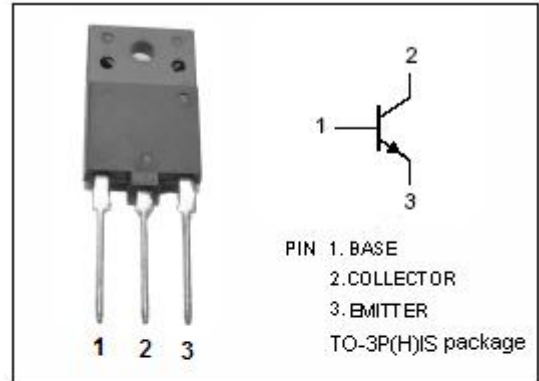
- High Breakdown Voltage-
: $V_{CBO} = 1500V$ (Min)
- High Switching Speed
- Low Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Horizontal deflection output for high resolution display.
- High speed switching power supply output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous	8	A
I_{CP}	Collector Current-Pulse	16	A
I_B	Base Current- Continuous	4	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ C$	50	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 5mA ; I _B = 0	600			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 6A; I _B = 1.5A			5.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 6A; I _B = 1.5A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 1500V ; I _E = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V ; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	8			
h _{FE-2}	DC Current Gain	I _C = 6A ; V _{CE} = 5V	4		8	
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A ; V _{CE} = 10V	1	3		MHz
C _{OB}	Output Capacitance	I _E =0 ; V _{CB} =10V;f _{test} =1.0MHz		175		pF

Switching times, Resistive load

t _{stg}	Storage Time	I _C = 6A , I _{B1} = 1.2A ; I _{B2} = -2.4A R _L =32 Ω			2.5	μ s
t _f	Fall Time				0.2	μ s

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