

isc Silicon NPN Power Transistor
2SC4881
DESCRIPTION

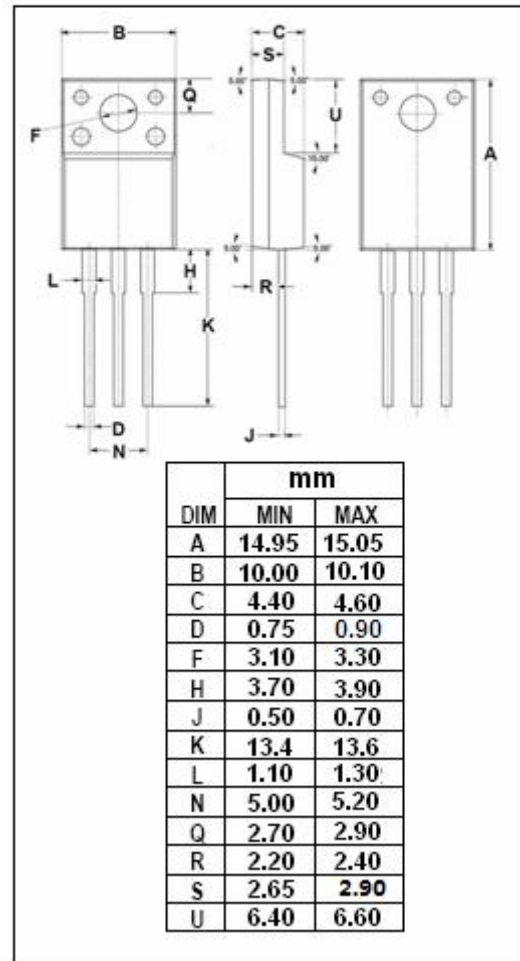
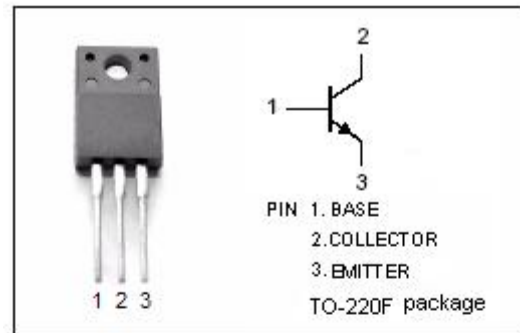
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50V(\text{Min})$
- High Switching Speed
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 0.4V(\text{Max})@ (I_C = 2.5A, I_B = 125mA)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Pulse	8	A
I_B	Base Current-Continuous	1	A
P_T	Total Power Dissipation @ $T_c=25^\circ\text{C}$	20	W
	Total Power Dissipation @ $T_a=25^\circ\text{C}$	2.0	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

 T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	50			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2.5A; I _B = 125mA			0.4	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2.5A; I _B = 125mA			1.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V ; I _E = 0			1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 1V	100		320	
h _{FE-2}	DC Current Gain	I _C = 2.5A ; V _{CE} = 1V	60			
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f= 1.0MHz		45		pF
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 4V		100		MHz

Switching times

t _{on}	Turn-on Time			0.1		μ s
t _{stg}	Storage Time	R _L = 12 Ω , I _{B1} = -I _{B2} = 125mA, V _{CC} = 30V		0.8		μ s
t _f	Fall Time			0.1		μ s

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