

isc Silicon NPN Power Transistor

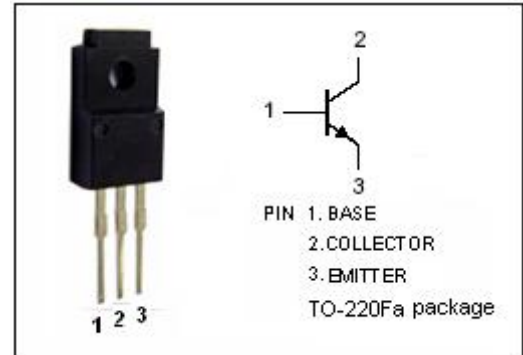
2SC3627

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 200V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

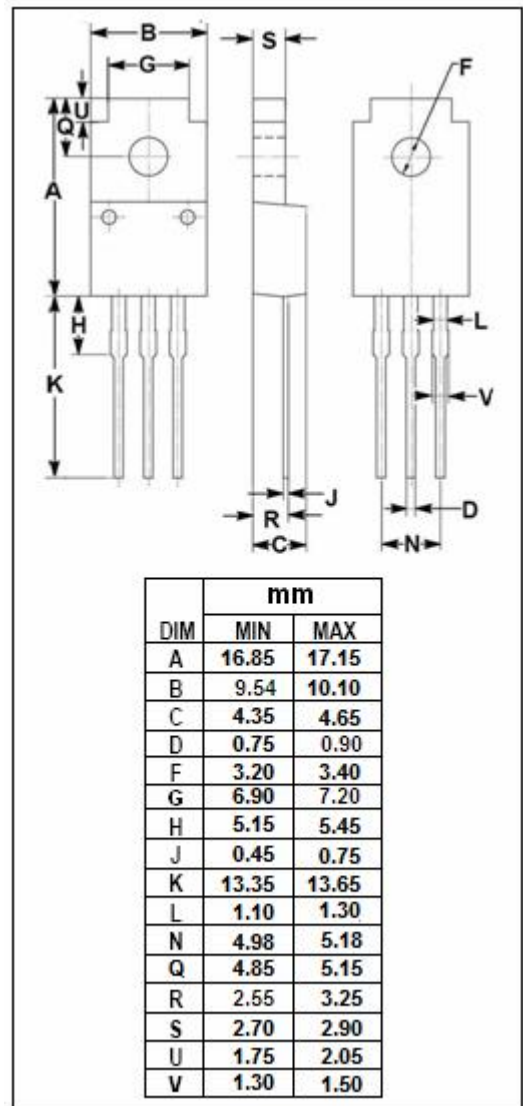
APPLICATIONS

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



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	30	
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 _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	200			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA ; I _E = 0	250			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V ; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V ; I _C = 0			1	mA
h _{FE-1}	DC Current Gain	I _C = 10mA ; V _{CE} = 5V	15			
h _{FE-2}	DC Current Gain	I _C = 5A ; V _{CE} = 5V	20		80	

Switching Times

t _r	Rise Time	I _{B1} = -I _{B2} = 0.6A, V _{CC} ≈ 150V, R _L = 25 Ω ; P _W = 20 μ s; Duty≤1%			1.0	μ s
t _{stg}	Storage Time				2.5	μ s
t _f	Fall Time				1.0	μ s

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