

isc Silicon NPN Power Transistor
2SC2527
DESCRIPTION

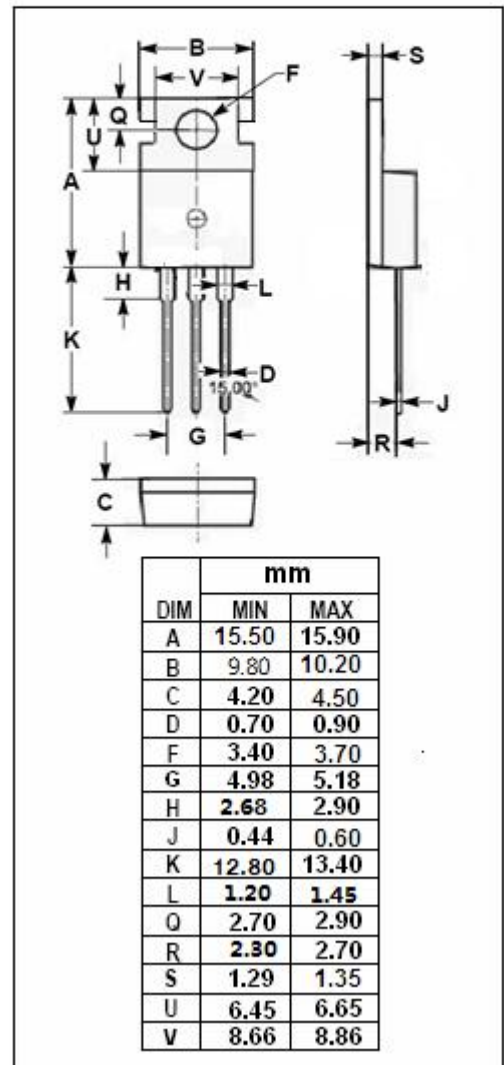
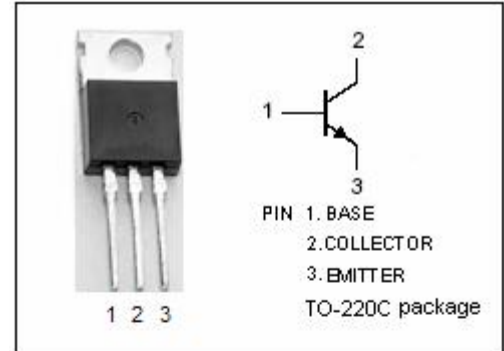
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_c	Collector Current-Continuous	10	A
P_c	Total Power Dissipation @ $T_c = 25^\circ\text{C}$	60	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	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	120		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA ; I _E = 0	120		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A		1.8	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 5A; V _{CE} = 5V		1.7	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V ; I _E = 0		50	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0		50	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	60	200	
h _{FE-2}	DC Current Gain	I _C = 5A ; V _{CE} = 5V	40		
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V	40		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V, f _{test} = 1MHz		300	pF

Switching times

t _r	Rise Time	I _C = 7.5A, R _L = 4Ω, I _{B1} = -I _{B2} = 0.75A,		0.3	μ s
t _{stg}	Storage Time			1.3	μ s
t _f	Fall Time			0.2	μ s

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