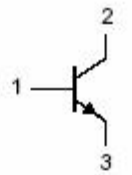
isc Silicon NPN Power Transistor — 2SC2527



PIN 1. BASE
2. COLLECTOR
3. EMITTER
TO-220C package

DESCRIPTION

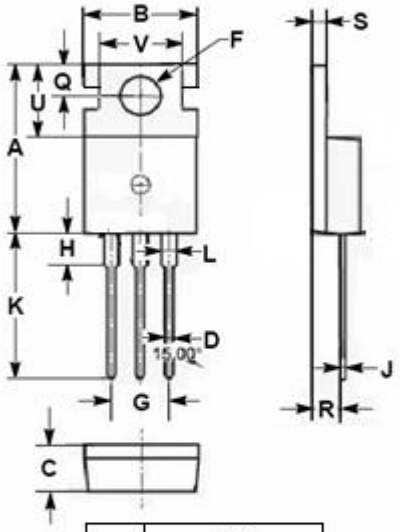
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 120V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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
Pc	Total Power Dissipation @ T_C=25℃	60	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0		50	μA
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	μs
t_{stg}	Storage Time			1.3	μs
t_f	Fall Time			0.2	μs