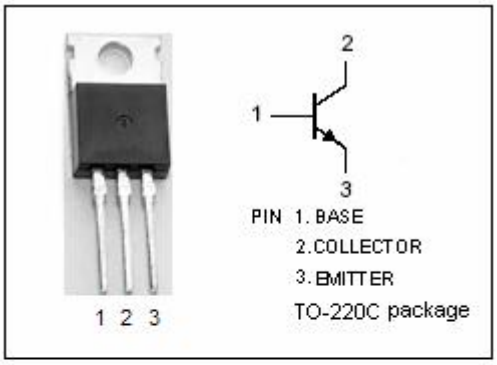
isc Silicon NPN Power Transistor — 2SD317

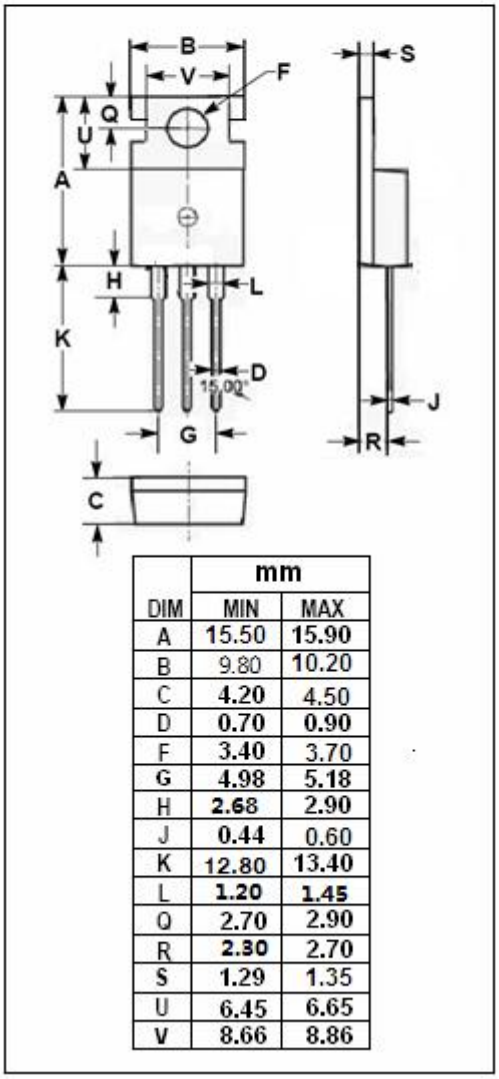
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 60V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.2V(Max) @I_C= 3.0A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for use in general purpose power amplifier and switching applications



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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	3.0	A
I_{CM}	Collector Current-Peak	5.0	A
P_C	Collector Power Dissipation @ T_a=25℃	1.5	W
	Collector Power Dissipation @ T_C=25℃	25	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	3.125	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 10mA ; I_B= 0	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.3A			1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A ; V_{CE}= 4V			1.8	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V ; I_E= 0			0.1	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 60V ; I_B= 0			0.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V ; I_C= 0			0.1	mA
h_{FE-1}	DC Current Gain	I_C= 0.1A ; V_{CE}= 3V	60			
h_{FE-2}	DC Current Gain	I_C= 1A ; V_{CE}= 3V	60		320	
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= 10V;f_{test}= 1.0MHz	3			MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V,f_{test}= 1MHz		65		pF