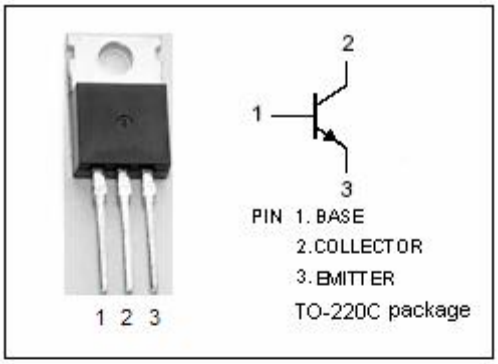
isc Silicon NPN Power Transistor — 2SC3254

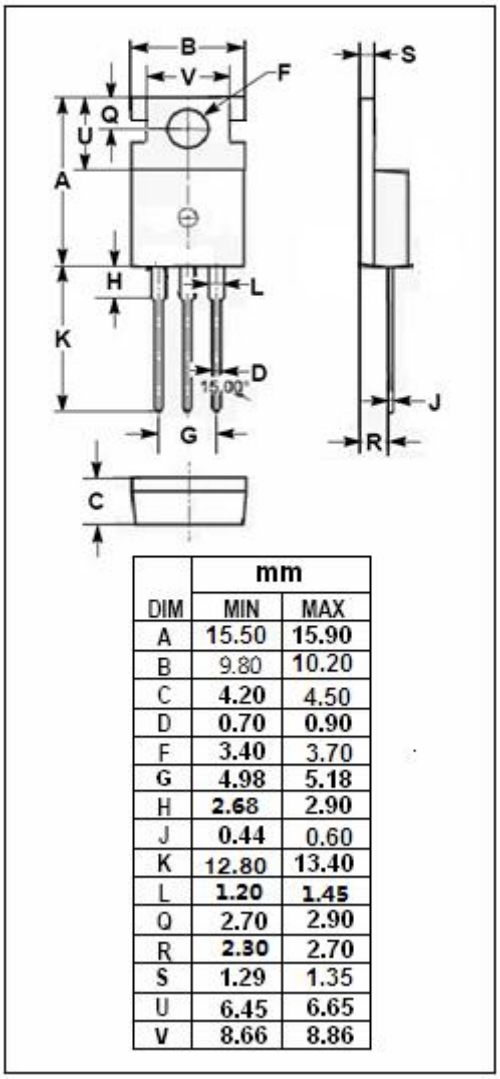


DESCRIPTION

- Low Collector Saturation Voltage
- Good Linearity of h_{FE}
- High Switching Speed
- Complement to Type 2SA1290
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Various inductance lamp drivers for electrical equipment
- Inverters, converters
- Power amplifier
- Switching regulator, dirver



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	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Pulse	10	A
P_C	Collector Power Dissipation @ T_C=25℃	35	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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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= 1mA ; R_{BE}= ∞	60			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	80			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3.5A; I_B= 0.175A			0.4	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 40V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 4V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 1A ; V_{CE}= 2V	70		280	
f_T	Current-Gain—Bandwidth Product	I_C=1A ; V_{CE}= 5V		100		MHz
Switching times						
t_{on}	Turn-on Time	I_C= 3A; I_{B1}= -I_{B2}= 0.15A; R_L=6.67Ω ; V_{CC}= 20V		0.1		μs
t_{stg}	Storage Time			0.5		μs
t_f	Fall Time			0.1		μs

◆ **h_{FE} Classifications**

Q	R	S
70-140	100-200	140-280