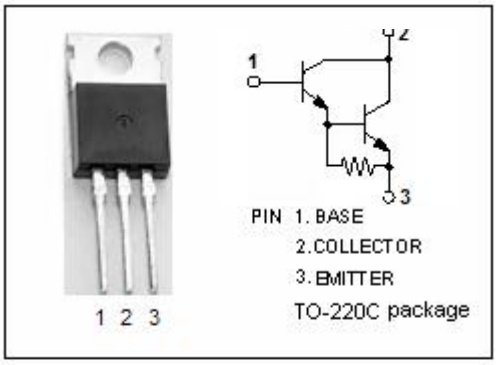
isc Silicon NPN Darlington Power Transistor 2SD1558

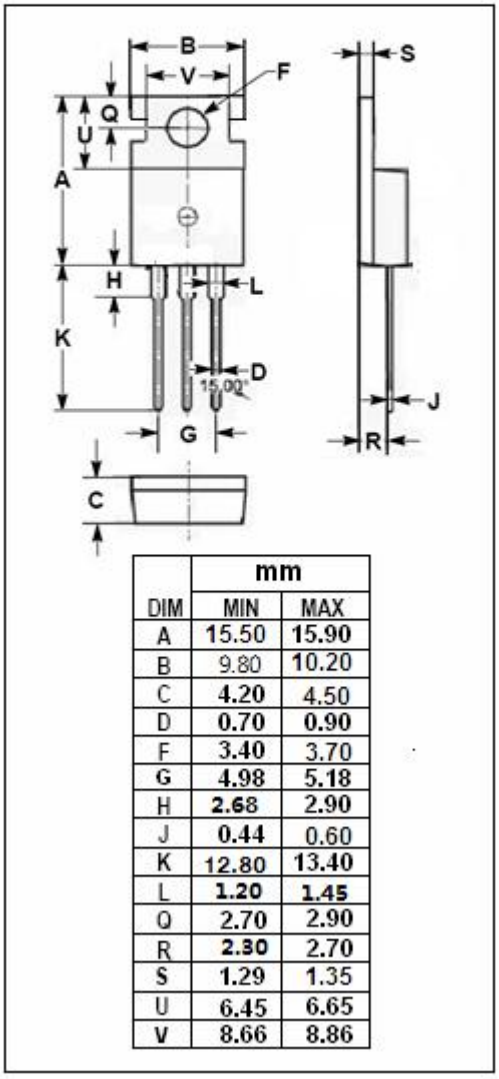


DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1000(Min)@ I_C= 2A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 60V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = 1.5V(Max)@ I_C= 2A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifier 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	7	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	8	A
P_C	Collector Power Dissipation @T_C=25℃	40	W
	Collector Power Dissipation @T_a=25℃	2	
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
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 25mA, I_B= 0	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 50mA; I_C= 0	7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 2A, I_B= 4mA			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 4A, I_B= 40mA			3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 2A, I_B= 4mA			2.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 4A, I_B= 40mA			3.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V, I_E= 0			0.1	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 50V, I_B= 0			10	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			50	mA
h_{FE-1}	DC Current Gain	I_C= 2A; V_{CE}= 3V	1000		20000	

Switching Times

t_{on}	Turn-on Time	I_C= 2A; I_{B1}= I_{B2}= 4mA		0.5		μs
t_s	Storage Time			6.0		μs
t_f	Fall Time			1.5		μs

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