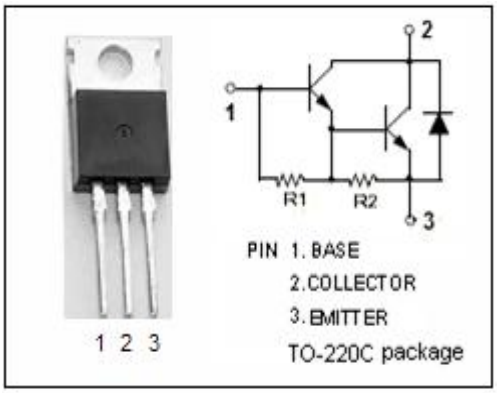
isc Silicon NPN Darlington Power Transistor — 2SD560

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 100V(Min)
- High DC Current Gain
  : h_{FE}= 2000(Min) @I_C= 3.0A
- Low Saturation Voltage
- Complement to Type 2SB601
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

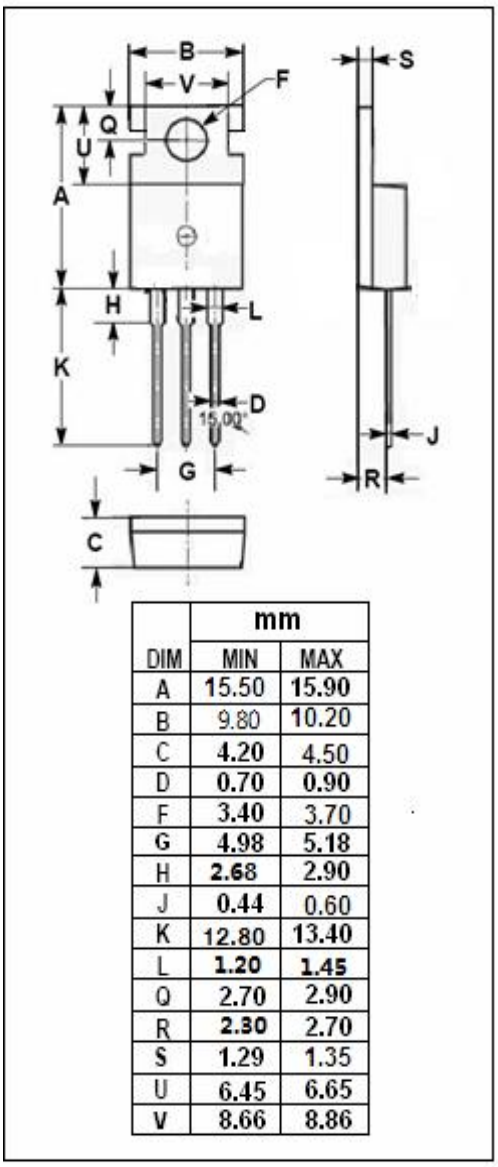


APPLICATIONS

- Designed for low frequency power amplifiers and low speed switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CP}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ T_a=25℃	1.5	W
	Collector Power Dissipation @ T_C=25℃	30	
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	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA;, I_B=0	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 3mA		1.2	1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 3mA		1.6	2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_E=0			1	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			3	mA
h_{FE-1}	DC Current Gain	I_C= 3A ; V_{CE}= 2V	2000	4000	15000	
h_{FE-2}	DC Current Gain	I_C= 5A ; V_{CE}= 2V	500			
Switching times						
t_{on}	Turn-on Time	I_C= 3A , I_{B1}= I_{B2}= 3mA R_L= 16.7Ω ; V_{CC}≈50V		0.5		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			1.0		μs