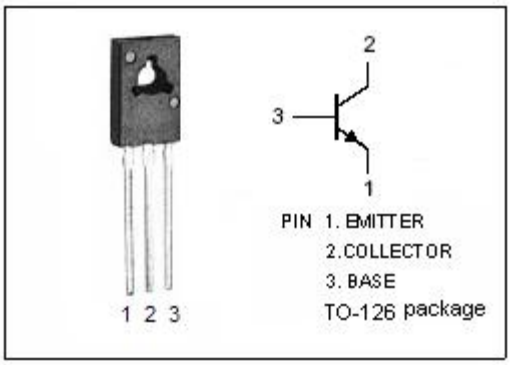
isc Silicon NPN Power Transistor — 2SC2270

DESCRIPTION

- High Collector Power Dissipation
  P_C=10W(Tc=25℃), P_C=1.0W(Ta=25℃)
- High DC Current Gain
  : h_{FE}=140~450@V_{CE}=2V,I_C=0.5A
  h_{FE}=70(Min)@V_{CE}=2V,I_C=4A
- Low Collector Saturation Voltage
  $V_{CE(sat)}$=1.0V(Max)@I_C=4A,I_B=0.1A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

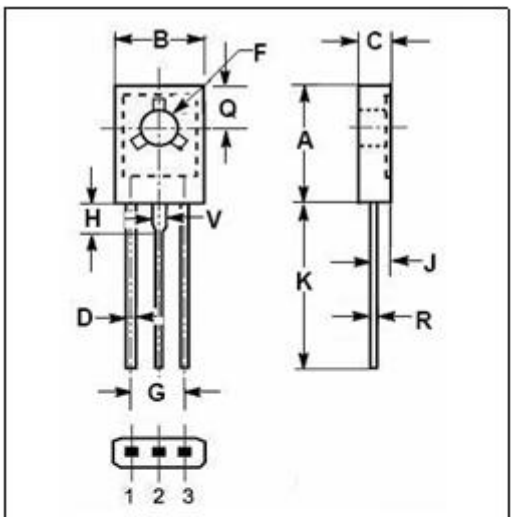


APPLICATIONS

- Designed for strobo flash
  and medimum power amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{CES}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
I_E	Emitter Current-Continuous	-5	A
I_{EM}	Emitter Current-Peak	-8	A
P_C	Collector Power Dissipation @ T_C=25℃	10	W
	Collector Power Dissipation @ T_a=25℃	1.0	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	10.70	10.95
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

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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_E= 0	20			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Vltage	I_E= 1mA ; I_C= 0	8			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 0.1A			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A ; V_{CE}= 2V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 40V; I_E= 0			100	nA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0			100	nA
h_{FE-1}	DC Current Gain	I_C= 0.5A ; V_{CE}= 2V	140		450	
h_{FE-2}	DC Current Gain	I_C= 4A ; V_{CE}= 2V	70			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 2V		100		MHz
Cob	Collector Output Capacitance	V_{CB}=10V,I_E=0,f=1MHz		40		pF

◆ **h_{FE-1} Classifications**

A	B	C
140-240	200-330	300-450