

isc Silicon NPN Power Transistor

2SD1139

DESCRIPTION

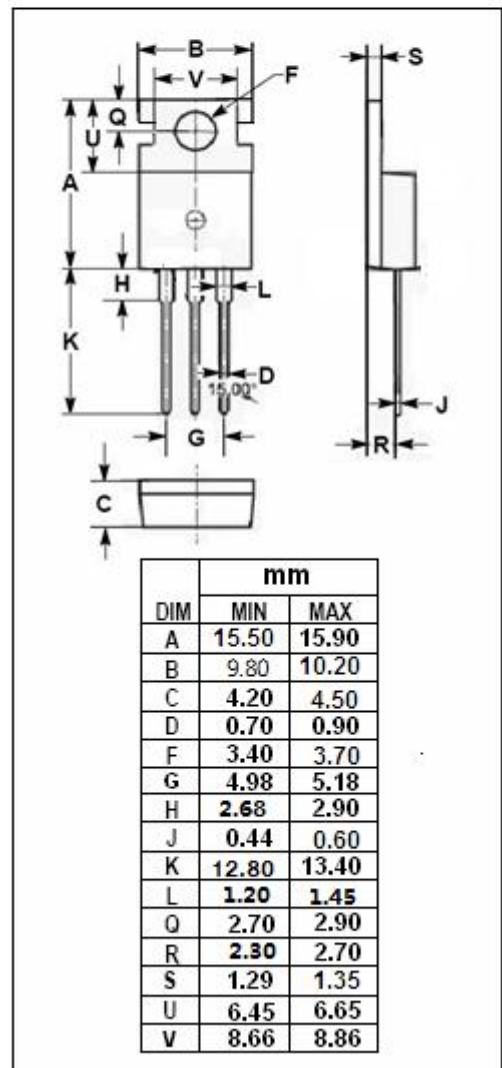
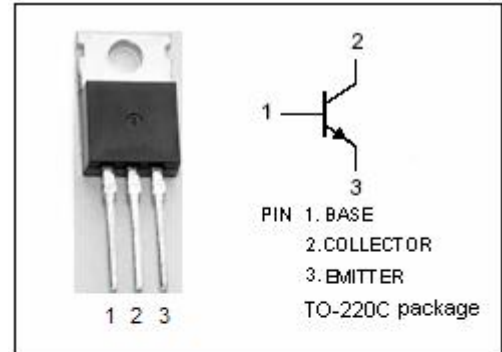
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 200V$ (Min)
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifier TV vertical deflection output applications

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	5	A
P_C	Collector Power Dissipation @ $T_a=25^\circ C$	1.8	W
	Collector Power Dissipation @ $T_c=25^\circ C$	30	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-45~150	$^\circ C$



isc Silicon NPN Power Transistor**2SD1139****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; R _{BE} = ∞	200			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 0.5A; I _B = 0.05A			3.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 50mA ; V _{CE} = 4V			1.0	V
I _{CBO}	Collector Cutoff Current	V _{CE} = 200V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 50mA; V _{CE} = 4V	60		320	
h _{FE-2}	DC Current Gain	I _C = 500mA; V _{CE} = 10V	60			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 100V; f _{test} = 1.0MHz	20			pF

◆ h_{FE-1} Classifications

B	C	D
60-120	100-200	160-320

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