

isc Silicon NPN Power Transistor

2SD1138

DESCRIPTION

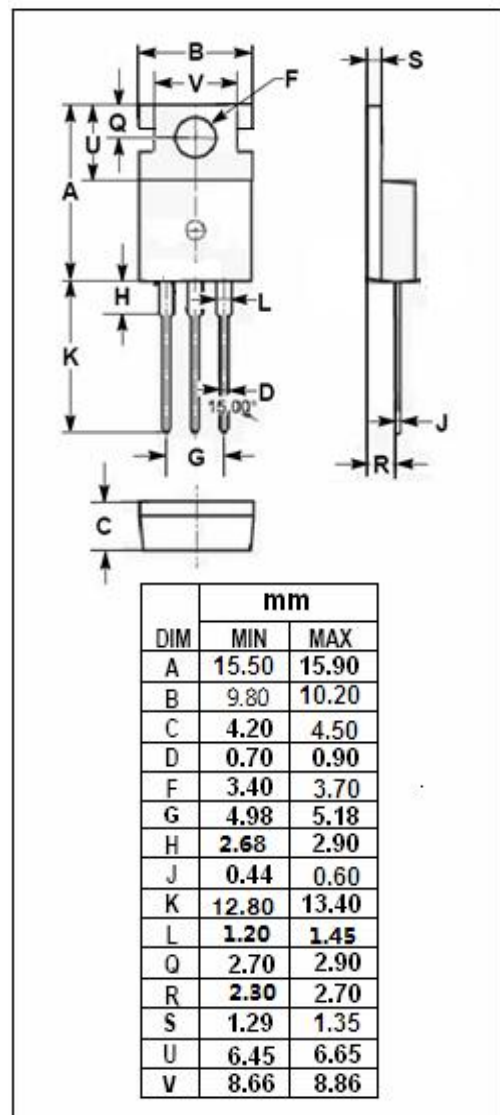
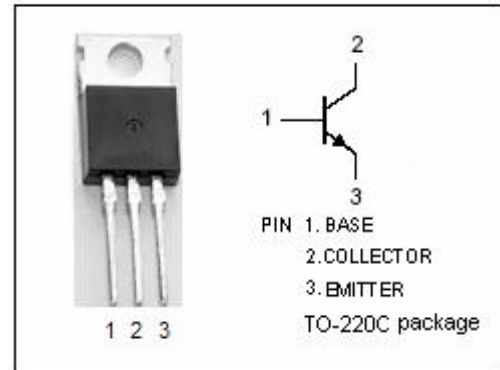
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 150V$ (Min)
- Wide Area of Safe Operation
- Complement to Type 2SB861
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	150	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**2SD1138****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=30\text{mA}$; $R_{BE}=\infty$	150			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=5\text{mA}$; $I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}$; $I_B=0.05\text{A}$			3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=50\text{mA}$; $V_{CE}=4\text{V}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CE}=120\text{V}$; $I_E=0$			1	μA
h_{FE-1}	DC Current Gain	$I_C=50\text{mA}$; $V_{CE}=4\text{V}$	60		320	
h_{FE-2}	DC Current Gain	$I_C=500\text{mA}$; $V_{CE}=10\text{V}$	60			
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=100\text{V}$; $f_{test}=1.0\text{MHz}$		20		pF

◆ h_{FE-1} Classifications

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

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