

**isc Silicon NPN Power Transistor**

**FJB102**

**DESCRIPTION**

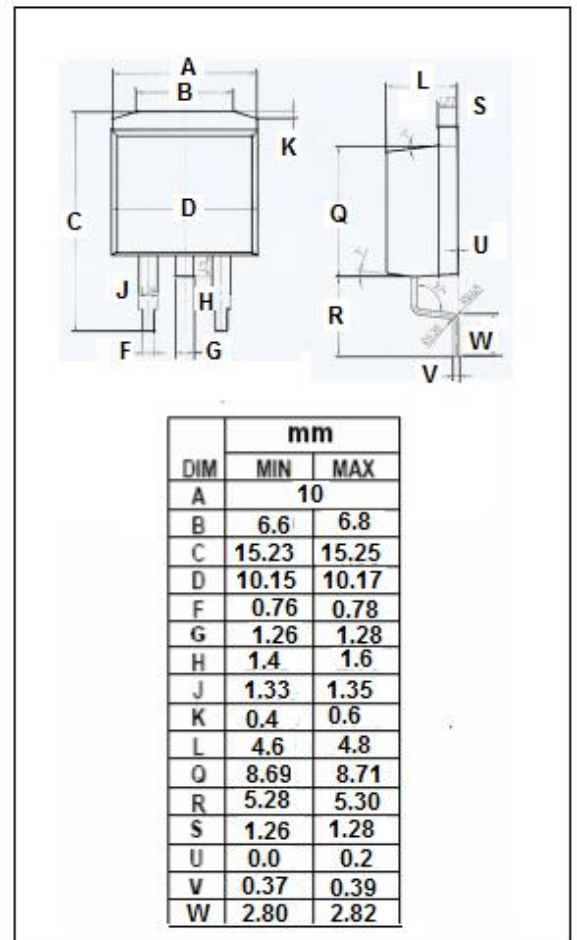
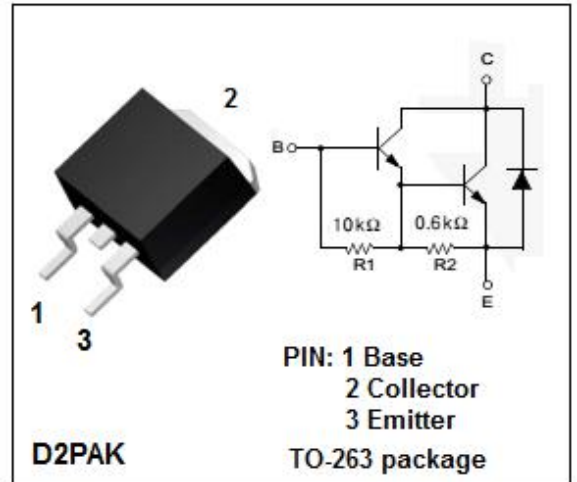
- High DC Current Gain-  
:  $h_{FE} = 1000(\text{Min}) @ I_C = 3A$
- Low Collector-Emitter Saturation Voltage
- 100% tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for general purpose amplifier and low speed switching applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	8	A
$I_{CP}$	Collector Current-Pulse	15	A
$I_B$	Base Current	1	A
$P_C$	Total Power Dissipation @ $T_C=25^\circ\text{C}$	80	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$



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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CE0(sus)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}$ , $I_B=0$	100			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=3.0\text{A}$ ; $I_B=6\text{mA}$			2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=8\text{A}$ ; $I_B=80\text{mA}$			2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=8\text{A}$ ; $V_{CE}=4\text{V}$			2.8	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=100\text{V}$ ; $I_E=0$			50	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=50\text{V}$ , $I_B=0$			50	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}$ ; $I_C=0$			2	mA
$h_{FE-1}$	DC Current Gain	$I_C=3\text{A}$ ; $V_{CE}=4\text{V}$	1000		20000	
$h_{FE-2}$	DC Current Gain	$I_C=8\text{A}$ ; $V_{CE}=4\text{V}$	200			
$C_{ob}$	Collector output capacitance	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		200		pF

**NOTICE:**

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