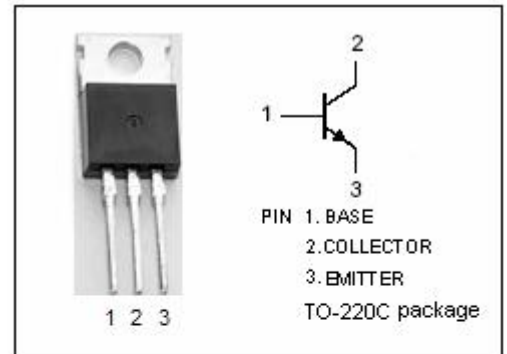


**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 120V(\text{Min})$
- DC Current Gain-  
:  $h_{FE} = 40(\text{Min}) @ I_C = 500mA$
- Complement to Type BD956

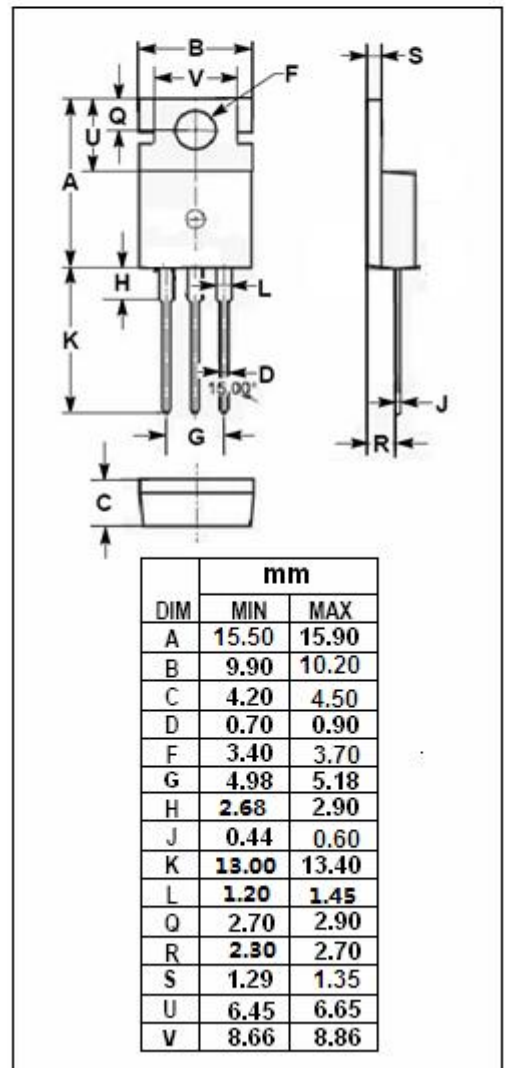
**APPLICATIONS**

- Designed for power amplifier and switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	120	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.12	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$

**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	$I_C=1\text{mA}; I_B=0$	120			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=2\text{A}; V_{CE}=4\text{V}$			1.4	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=120\text{V}; I_E=0$			50	$\mu\text{A}$
		$V_{CB}=60\text{V}; I_E=0, T_J=150^{\circ}\text{C}$			1.0	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=60\text{V}; I_B=0$			0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.2	mA
$h_{FE-1}$	DC Current Gain	$I_C=500\text{mA}; V_{CE}=4\text{V}$	40			
$h_{FE-2}$	DC Current Gain	$I_C=2\text{A}; V_{CE}=4\text{V}$	20			
$f_T$	Current-Gain—Bandwidth Product	$I_C=500\text{mA}; V_{CE}=4\text{V}$	3			MHz

Switching Times

$t_{on}$	Turn-On Time	$I_C=1.0\text{A}; I_{B1}=-I_{B2}=0.1\text{A}; V_{CC}=20\text{V}; R_L=20\Omega$		0.3		$\mu\text{s}$
$t_{off}$	Turn-Off Time			1.5		$\mu\text{s}$