

isc Silicon NPN Power Transistor

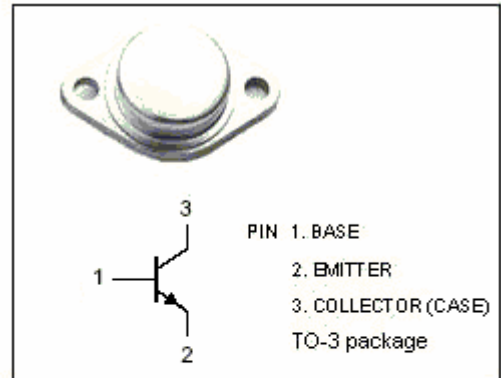
MJ802

DESCRIPTION

- High DC Current Gain-  
:  $h_{FE} = 25-100 @ I_C = 7.5A$
- Excellent Safe Operating Area
- Complement to Type MJ4502

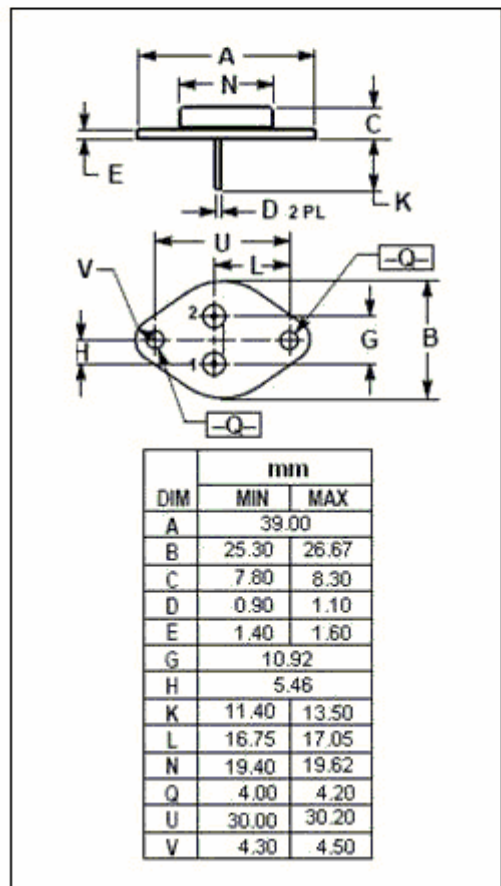
APPLICATIONS

- Designed for use as an output device in complementary audio amplifiers to 100-Watts music power per channel.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	90	V
$V_{EBO}$	Emitter-Base Voltage	4	V
$I_C$	Collector Current-Continuous	30	A
$I_B$	Base Current-Continuous	7.5	A
$P_C$	Collector Power Dissipation@ $T_C=25^{\circ}C$	200	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~200	$^{\circ}C$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.875	$^{\circ}C/W$

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## ELECTRICAL CHARACTERISTICS

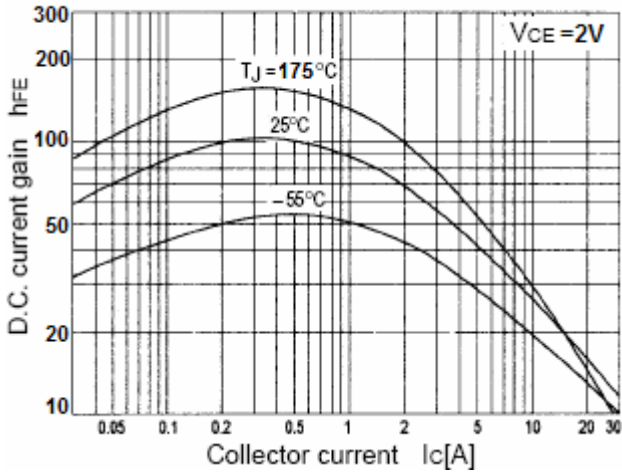
 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2A ; I_B=0$	90			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=7.5A ; I_B=0.75A$			0.8	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=7.5A ; I_B=0.75A$			1.3	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=7.5A ; V_{CE}=2V$			1.3	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=100V ; I_E=0$ $V_{CB}=100V ; I_E=0 ; T_C=150^{\circ}\text{C}$			1.0 5.0	mA
$I_{EBO}$	Emitter Cutoff current	$V_{EB}=4V ; I_C=0$			1.0	mA
$h_{FE}$	DC Current Gain	$I_C=7.5A ; V_{CE}=2V$	25		100	
$f_T$	Current-Gain—Bandwidth Product	$I_C=1A ; V_{CE}=10V ; f=1.0\text{MHz}$	2.0			MHz

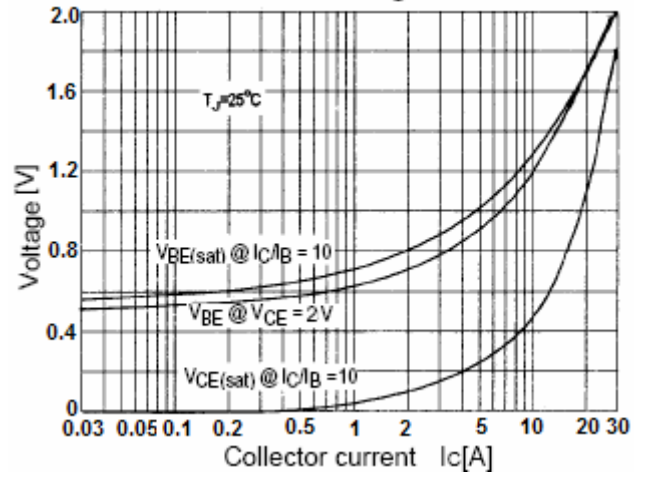
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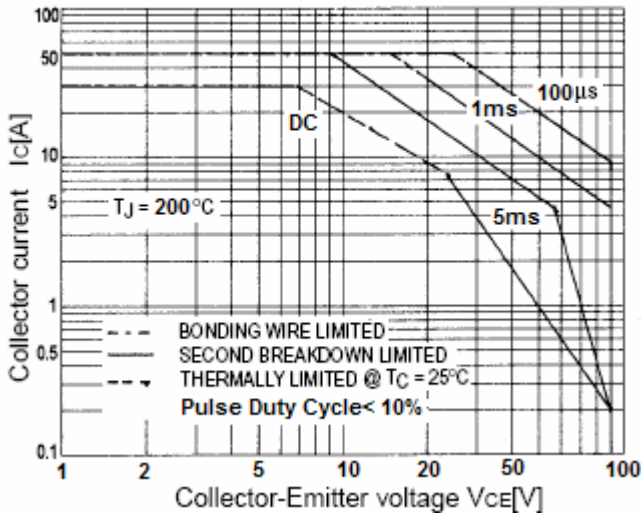
**$h_{FE}$ - $I_C$  Characteristics**



**"On" Voltages**



**Safe Operating Area**



**Power Derating**

