

**DESCRIPTION**

- DC Current Gain-  
:  $h_{FE} = 20(\text{Min}) @ I_C = -10\text{A}$
- Low Saturation Voltage-  
:  $V_{CE(\text{sat})} = -1.0\text{V}(\text{Max}) @ I_C = -15\text{A}$
- Complement to Type 2N5885/5886

**APPLICATIONS**

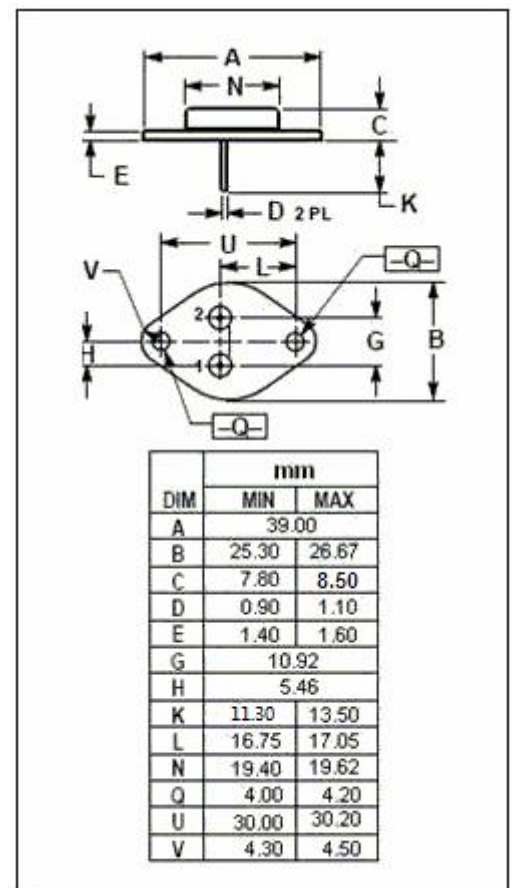
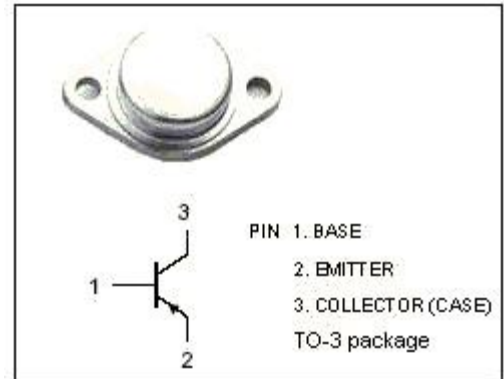
- Designed for general purpose power amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CBO}$	Collector-Base Voltage	2N5883	-60	V
		2N5884	-80	
$V_{CEO}$	Collector-Emitter Voltage	2N5883	-60	V
		2N5884	-80	
$V_{EBO}$	Emitter-Base Voltage	-5	V	
$I_C$	Collector Current-Continuous	-25	A	
$I_{CM}$	Collector Current-Peak	-50	A	
$I_B$	Base Current-Continuous	-7.5	A	
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	200	W	
$T_J$	Junction Temperature	150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$	

**THERMAL CHARACTERISTICS**

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



**ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	2N5883	I <sub>C</sub> =-50mA ; I <sub>B</sub> = 0	-60		V
		2N5884		-80		
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage		I <sub>C</sub> =-15A; I <sub>B</sub> =-1.5A		-1.0	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage		I <sub>C</sub> =-25A; I <sub>B</sub> =-6.25A		-4.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage		I <sub>C</sub> =-25A; I <sub>B</sub> =-6.25A		-2.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V		-1.5	V
I <sub>CEO</sub>	Collector Cutoff Current	2N5883	V <sub>CE</sub> =-30V; I <sub>B</sub> = 0		-2.0	mA
		2N5884		V <sub>CE</sub> =-40V; I <sub>B</sub> = 0		
I <sub>CEX</sub>	Collector Cutoff Current	2N5883	V <sub>CE</sub> =-60V; V <sub>BE(off)</sub> = 1.5V V <sub>CE</sub> =-60V; V <sub>BE(off)</sub> = 1.5V, T <sub>C</sub> =150°C		-1.0 -10	mA
		2N5884		V <sub>CE</sub> =-80V; V <sub>BE(off)</sub> = 1.5V V <sub>CE</sub> =-80V; V <sub>BE(off)</sub> = 1.5V, T <sub>C</sub> =150°C		
I <sub>CBO</sub>	Collector Cutoff Current	2N5883	V <sub>CB</sub> =-60V; I <sub>E</sub> = 0		-1.0	mA
		2N5884		V <sub>CB</sub> =-80V; I <sub>E</sub> = 0		
I <sub>EBO</sub>	Emitter Cutoff Current		V <sub>EB</sub> =-5V; I <sub>C</sub> =0		-1.0	mA
h <sub>FE-1</sub>	DC Current Gain		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V	35		
h <sub>FE-2</sub>	DC Current Gain		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V	20	100	
h <sub>FE-3</sub>	DC Current Gain		I <sub>C</sub> =-25A ; V <sub>CE</sub> =-4V	4		
C <sub>OB</sub>	Output Capacitance		I <sub>E</sub> = 0; V <sub>CB</sub> =-10V; f <sub>test</sub> = 1MHz		500	pF
f <sub>T</sub>	Current-Gain—Bandwidth Product		I <sub>C</sub> =-1A ; V <sub>CE</sub> =-10V ; f <sub>test</sub> = 1MHz	4		MHz

Switching Times

t <sub>r</sub>	Rise Time	I <sub>C</sub> =-10A; I <sub>B1</sub> = -I <sub>B2</sub> =-1A; V <sub>CC</sub> = -30V		0.7	μ s
t <sub>stg</sub>	Storage Time			1.0	μ s
t <sub>f</sub>	Fall Time			0.8	μ s