

isc Silicon NPN Power Transistors

2N6497/6498/6499

DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 250V(\text{Min})$ - 2N6497  
=  $300V(\text{Min})$ - 2N6498  
=  $350V(\text{Min})$ - 2N6499
- DC Current Gain-  
:  $h_{FE} = 10-75 @ I_C = 2.5A$

APPLICATIONS

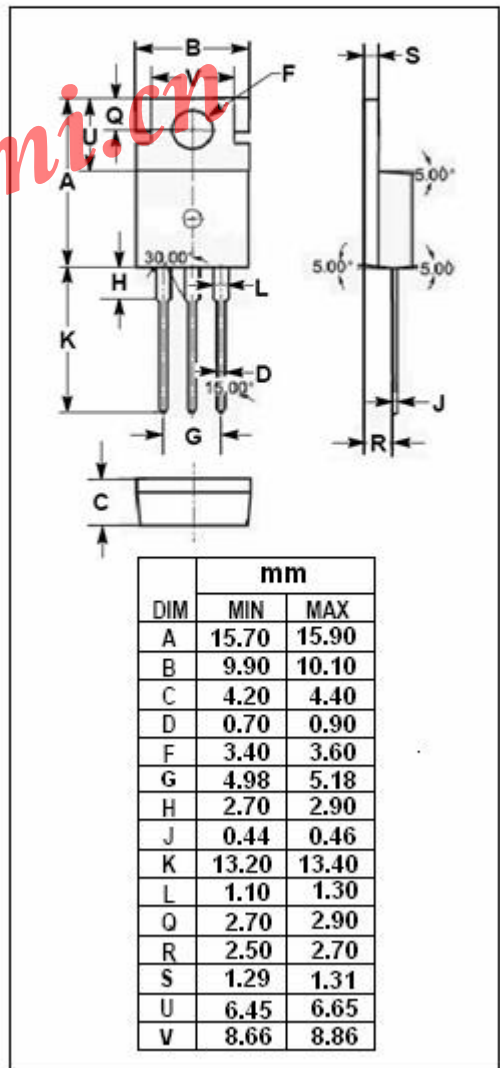
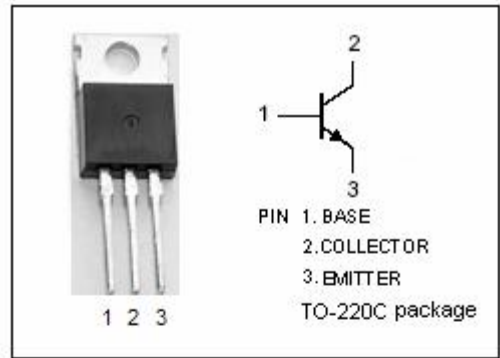
- Designed for high voltage inverters, switching regulators and line operated amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	2N6497	350
		2N6498	400
		2N6499	450
$V_{CEO}$	Collector-Emitter Voltage	2N6497	250
		2N6498	300
		2N6499	350
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	10	A
$I_B$	Base Current	2	A
$P_D$	Total Power Dissipation@ $T_C=25^\circ C$	80	W
$T_j$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-65~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Rresistance,Junction to Case	1.56	$^\circ C/W$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT	
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	2N6497	I <sub>C</sub> = 25mA; I <sub>B</sub> = 0	250		V	
		2N6498		300			
		2N6499		350			
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	2N6497	I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.5A		1.0	V	
		2N6498		1.25			
		2N6499		1.5			
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage		I <sub>C</sub> = 5A; I <sub>B</sub> = 2A		5.0	V	
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage		I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.5A		1.5	V	
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage		I <sub>C</sub> = 5A; I <sub>B</sub> = 2A		2.5	V	
I <sub>CEX</sub>	Collector Cutoff Current	2N6497	V <sub>CE</sub> = 350V; V <sub>BE(off)</sub> = 1.5V V <sub>CE</sub> = 175V; V <sub>BE(off)</sub> = 1.5V; T <sub>C</sub> =100°C		1.0	mA	
		2N6498		V <sub>CE</sub> = 400V; V <sub>BE(off)</sub> = 1.5V V <sub>CE</sub> = 200V; V <sub>BE(off)</sub> = 1.5V; T <sub>C</sub> =100°C			1.0
		2N6499		V <sub>CE</sub> = 450V; V <sub>BE(off)</sub> = 1.5V V <sub>CE</sub> = 225V; V <sub>BE(off)</sub> = 1.5V; T <sub>C</sub> =100°C			1.0
I <sub>EBO</sub>	Emitter Cutoff Current		V <sub>EB</sub> = 6V; I <sub>C</sub> = 0		1.0	mA	
h <sub>FE-1</sub>	DC Current Gain		I <sub>C</sub> = 2.5A ; V <sub>CE</sub> = 10V	10	75		
h <sub>FE-2</sub>	DC Current Gain		I <sub>C</sub> = 5A ; V <sub>CE</sub> = 10V	3			
f <sub>T</sub>	Current-Gain—Bandwidth Product		I <sub>C</sub> = 0.25A; V <sub>CE</sub> = 10V; f <sub>test</sub> =1.0MHz	5		MHz	

Switching Times; Duty Cycle ≤ 2%

t <sub>r</sub>	Rise Time	V <sub>CC</sub> = 125V; t <sub>p</sub> = 0.1ms I <sub>C</sub> =2.5A; I <sub>B1</sub> = -I <sub>B2</sub> =0.5 A		1.0	μs
t <sub>S</sub>	Storage Time			2.5	μs
t <sub>f</sub>	Fall Time			1.0	μs