

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

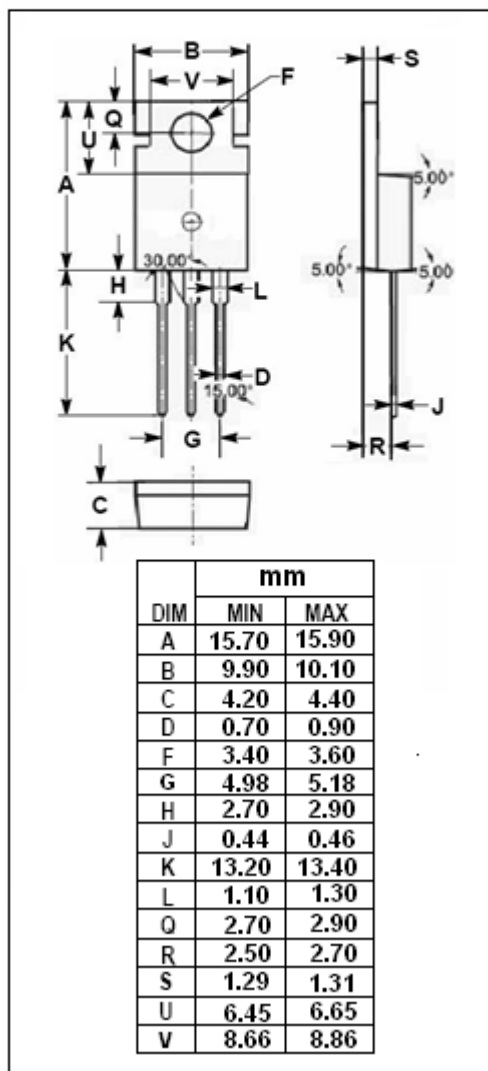
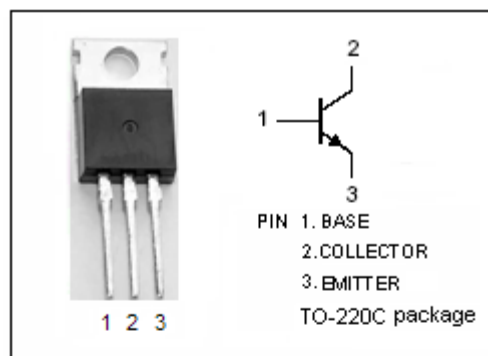
- Designed for high voltage inverters, switching regulators and line operated amplifier applications.

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

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@ $T_C = 25^\circ\text{C}$	80	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	1.56	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

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

Switching Times; Duty Cycle ≤ 2%

t _r	Rise Time	V _{CC} = 125V, t _p = 0.1ms I _C =2.5A; I _{B1} = -I _{B2} =0.5 A		1.0	μs
t _s	Storage Time			2.5	μs
t _f	Fall Time			1.0	μs