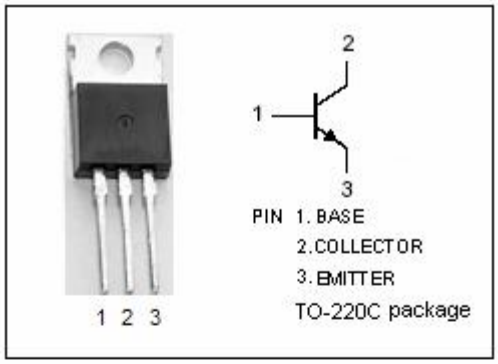
isc Silicon NPN Power Transistors 2N6497/6498/6499

DESCRIPTION

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

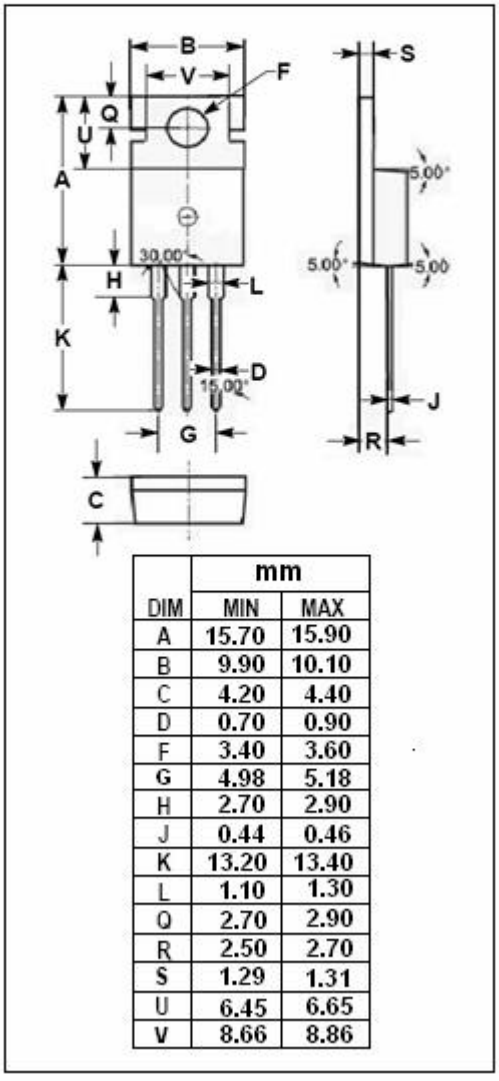


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	2N6497	350	V
		2N6498	400	
		2N6499	450	
V_{CEO}	Collector-Emitter Voltage	2N6497	250	V
		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℃		80	W
T_j	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-65~150	℃



DIM	mm MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

Tj=25℃ 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℃		1.0 10	mA
		2N6498	V_{CE}= 400V;$V_{BE(off)}$= 1.5V V_{CE}= 200V;$V_{BE(off)}$= 1.5V ;T_C=100℃		1.0 10	
		2N6499	V_{CE}= 450V;$V_{BE(off)}$= 1.5V V_{CE}= 225V;$V_{BE(off)}$= 1.5V ;T_C=100℃		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