Central™
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Manufacturers of World Class Discrete Semiconductors

2N6306
2N6307
2N6308

NPN Silicon Transistor

JEDEC TO-3 Case

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6306, 2N6307, and 2N6308 are NPN Silicon Power Transistors designed for high voltage inverters, switching regulators, line operated amplifiers, and switching power supplies.

MAXIMUM RATINGS (T=25°C)

		2N6306	2N6307	2N6308
Collector-Emitter Voltage	V_{CEO}	250V	300V	350V
Collector-Base Voltage	V_{CBO}	500V	600V	700V
Emitter-Base Voltage	V_{EBO}		8V	
Collector Current	I_C		8A	
Base Current	I_B		4A	
Power Dissipation	P_T		125W	
Operating & Storage Junction Temperature	T_J, T_{stg}		-65 to +200°C	

ELECTRICAL CHARACTERISTICS (T=25°C)

		2N6306		2N6307		2N6308		
Symbol	Test Conditions	Min	Max	Min	Max	Min	Max	Unit
I_{CEV}	V_{CE}=rated V_{CB}, V_{EB}=1.5V		500		500		500	uA
I_{CEO}	V_{CE}=rated V_{CEO}		500		500		500	uA
I_{EBO}	V_{EB}=8V		1.0		1.0		1.0	mA
V_{CEO}	I_C=100mA	250		300		350		V
$V_{CE(s)}$	I_C=3A, I_B=0.6A		0.8		1.0		1.5	V
$V_{CE(s)}$	I_C=8A, I_B=2A		5.0		5.0			V
$V_{CE(s)}$	I_C=8A, I_B=2.67A						5.0	V
$V_{BE(s)}$	I_C=8A, I_B=2A		2.3		2.3			V
$V_{BE(s)}$	I_C=8A, I_B=2.67A						2.5	V
$V_{BE(on)}$	V_{CE}=5V, I_C=3A		1.3		1.3		1.5	V
h_{FE}	V_{CE}=5V, I_C=3A	15	75	15	75	12	60	-
h_{FE}	V_{CE}=5V, I_C=8A	4		4		3		-
f_T	V_{CE}=10V, I_C=0.3A, f=1.0 MHZ	5		5		5		MHZ
C_{ob}	V_{CB}=10V, f=1.0 MHZ		250		250		250	pF
t_r	V_{CC}=125V, I_C=3.0A, I_B=0.6A		0.6		0.6		0.6	uS
t_s	V_{CC}=125V, I_C=3.0A, I_B=0.6A		1.6		1.6		1.6	uS
t_f	V_{CC}=125V, I_C=3.0A, I_B=0.6A		0.4		0.4		0.4	uS