

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N6107 2N6109 2N6111 PNP
2N6288 2N6290 2N6292 NPN

COMPLEMENTARY SILICON
POWER TRANSISTORS

JEDEC TO-220 AB CASE

DESCRIPTION

THE CENTRAL SEMICONDUCTOR 2N6107, 2N6288 Series types are Complementary Silicon Power Transistors manufactured by the epitaxial base process designed for general purpose amplifier and switching applications.

MAXIMUM RATINGS (T_C=25°C)

	SYMBOL	2N6111 2N6288	2N6109 2N6290	2N6107 2N6292	UNIT
Collector-Base Voltage	V _{CBO}	40	60	80	V
Collector-Emitter Voltage	V _{CEO}	30	50	70	V
Emitter-Base Voltage	V _{EBO}	5.0	5.0	5.0	V
Collector Current	I _C	7.0	7.0	7.0	A
Collector Current (PEAK)	I _{CM}	10	10	10	A
Base Current	I _B	3.0	3.0	3.0	A
Power Dissipation	P _D	40	40	40	W
Operating and Storage Temperature	T _J , T _{stg}	-65 TO +150			°C
Thermal Resistance	θ _{JC}	3.13			°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
BV _{CEO}	I _C =100mA (2N6111, 2N6288)	30		V
BV _{CEO}	I _C =100mA (2N6109, 2N6290)	50		V
BV _{CEO}	I _C =100mA (2N6107, 2N6292)	70		V
I _{CEV}	V _{CE} =Rated V _{CBO} , V _{EB} (OFF)=1.5V		100	μA
I _{CEV}	V _{CE} =Rated V _{CEO} , V _{EB} (OFF)=1.5V, T _C =150°C		2.0	mA
I _{CEO}	V _{CE} =20V (2N6111, 2N6288)		1.0	mA
I _{CEO}	V _{CE} =40V (2N6109, 2N6290)		1.0	mA
I _{CEO}	V _{CE} =60V (2N6107, 2N6292)		1.0	mA
I _{EBO}	V _{BE} =5.0V		1.0	mA
V _{CE} (SAT)	I _C =7.0A, I _B =3.0A		3.5	V
V _{BE} (ON) [†]	V _{CE} =4.0V, I _C =7.0A		3.0	V
h _{FE}	V _{CE} =4.0V, I _C =2.0A (2N6107, 2N6292)	30	150	
h _{FE}	V _{CE} =4.0V, I _C =2.5A (2N6109, 2N6290)	30	150	
h _{FE}	V _{CE} =4.0V, I _C =3.0A (2N6111, 2N6288)	30	150	
h _{FE}	V _{CE} =4.0V, I _C =7.0A	2.3	-	
h _{fe}	V _{CE} =4.0V, I _C =0.5A, f=50kHz	20	-	
f _T	V _{CE} =4.0V, I _C =500mA, f=1.0MHz (NPN TYPES)	4.0		MHz
f _T	V _{CE} =4.0V, I _C =500mA, f=1.0MHz (PNP TYPES)	10		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=1.0MHz		250	pF