

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N6486 2N6487 2N6488 NPN
2N6489 2N6490 2N6491 PNP

SILICON POWER
COMPLEMENTARY TRANSISTORS

JEDEC TO-220AB CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6486, 2N6489 series types are Complementary Silicon Power Transistors designed for general purpose switching and amplifier applications.

MAXIMUM RATINGS ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

	SYMBOL	2N6486 2N6489	2N6487 2N6490	2N6488 2N6491	UNIT
Collector-Base Voltage	V_{CB0}	50	70	90	V
Collector-Emitter Voltage	V_{CE0}	40	60	80	V
Emitter-Base Voltage	V_{EB0}	5.0	5.0	5.0	V
Collector Current	I_C	15	15	15	A
Base Current	I_B	5.0	5.0	5.0	A
Power Dissipation	P_D	75	75	75	W
Power Dissipation ($T_A=25^{\circ}\text{C}$)	P_D	1.8	1.8	1.8	W
Operating and Storage					
Junction Temperature	T_J, T_{stg}		-65 TO +150		$^{\circ}\text{C}$
Thermal Resistance	θ_{JC}	1.67	1.67	1.67	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

SYMBOL	TEST CONDITIONS	2N6486 2N6489		2N6487 2N6490		2N6488 2N6491		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{CEV}	$V_{CE}=45\text{V}, V_{EB}(\text{OFF})=1.5\text{V}$		500					μA
I_{CEV}	$V_{CE}=65\text{V}, V_{EB}(\text{OFF})=1.5\text{V}$				500			μA
I_{CEV}	$V_{CE}=85\text{V}, V_{EB}(\text{OFF})=1.5\text{V}$						500	μA
I_{CE0}	$V_{CE}=\frac{1}{2}$ Rated V_{CE0}		1.0		1.0		1.0	mA
I_{EB0}	$V_{BE}=5.0\text{V}$		1.0		1.0		1.0	mA
BV_{CEV}	$V_{BE}=1.5\text{V}, I_C=200\text{mA}$	50		70		90		V
BV_{CE0}	$I_C=200\text{mA}$	40		60		80		V
$V_{CE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=0.5\text{A}$		1.3		1.3		1.3	V
$V_{CE}(\text{SAT})$	$I_C=15\text{A}, I_B=5.0\text{A}$		3.5		3.5		3.5	V
$V_{BE}(\text{ON})$	$V_{CE}=4.0\text{V}, I_C=5.0\text{A}$		1.3		1.3		1.3	V
$V_{BE}(\text{ON})$	$V_{CE}=4.0\text{V}, I_C=15\text{A}$		3.5		3.5		3.5	V
h_{FE}	$V_{CE}=4.0\text{V}, I_C=5.0\text{A}$	20	150	20	150	20	150	
h_{FE}	$V_{CE}=4.0\text{V}, I_C=15\text{A}$	5.0		5.0		5.0		
h_{fe}	$V_{CE}=4.0\text{V}, I_C=1.0\text{A}, f=1.0\text{kHz}$	25		25		25		
f_T	$V_{CE}=4.0\text{V}, I_C=1.0\text{A}, f=1.0\text{MHz}$	5.0		5.0		5.0		MHz