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Manufacturers of World Class Discrete Semiconductors

2N6548

2N6549

NPN SILICON DARLINGTON TRANSISTORS

JEDEC TO-202 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6548 series types are silicon NPN monolithic darlington transistors designed for amplifier and driver applications where high gain at a high collector current is important.

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

	SYMBOL		UNIT
Collector-Base Voltage	V_{CB0}	50	V
Collector-Emitter Voltage	V_{CES}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	12	V
Collector Current	I_C	2.0	A
Base Current	I_B	100	mA
Power Dissipation	P_D	2.0	W
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	10	W
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 TO +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	62.5	$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{JC}	12.5	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N6548		2N6549		UNIT
		MIN	MAX	MIN	MAX	
I_{CB0}	$V_{CB}=30\text{V}$		100		100	nA
I_{EBO}	$V_{EB}=10\text{V}$		100		100	nA
BV_{CB0}	$I_C=100\mu\text{A}$	50		50		V
BV_{CES}	$I_C=100\mu\text{A}$	40		40		V
BV_{EBO}	$I_E=10\mu\text{A}$	12		12		V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=2.0\text{mA}$		1.5		1.5	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=4.0\text{mA}$		2.0		2.0	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=2.0\text{mA}$		2.0		2.0	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$		2.0		2.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=200\text{mA}$	25,000	150,000	15,000	150,000	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	15,000		10,000		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$	5,000		3,000		
h_{fe}	$V_{CE}=5.0\text{V}, I_C=50\text{mA}, f=1.0\text{kHz}$	20,000		15,000		
f_T	$V_{CE}=5.0\text{V}, I_C=200\text{mA}, f=100\text{MHz}$	100		100		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		7.0		7.0	pF