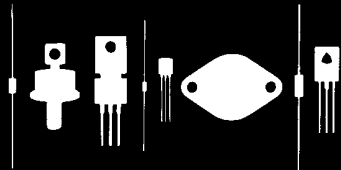


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145 Adams Avenue
Hauppauge, New York 11788



2N6544
2N6545

NPN SILICON TRANSISTOR

JEDEC TO-3 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6544, 2N6545 types are Silicon NPN Triple Diffused Mesa Transistors designed for high voltage, high current, high speed switching applications.

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

	SYMBOL	2N6544	2N6545	UNIT
Collector-Emitter Voltage	V_{CEV}	650	850	V
Collector-Emitter Voltage	V_{CEX}	350	450	V
Collector-Emitter Voltage	V_{CEO}	300	400	V
Emitter-Base Voltage	V_{EBO}	9.0		V
Collector Current	I_C	8.0		A
Collector Current (PEAK)	I_{CM}	16		A
Emitter Current	I_E	16		A
Emitter Current (PEAK)	I_{EM}	32		A
Base Current	I_B	8.0		A
Base Current (PEAK)	I_{BM}	16		A
Power Dissipation	P_D	125		W
Power Dissipation ($T_C=100^\circ\text{C}$)	P_D	71.5		W
Operating and Storage				
Junction Temperature	T_J, T_{stg}	-65 TO +200		$^\circ\text{C}$
Thermal Resistance	θ_{JC}	1.4		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	2N6544		2N6545		UNIT
		MIN	MAX	MIN	MAX	
I_{CEV}	$V_{CE}=\text{Rated } V_{CEV}, V_{BE}(\text{OFF})=1.5\text{V}$		0.5		0.5	mA
I_{CEV}	$V_{CE}=\text{Rated } V_{CEV}, V_{BE}(\text{OFF})=1.5\text{V}, T_C=100^\circ\text{C}$		2.5		2.5	mA
I_{CER}	$V_{CE}=\text{Rated } V_{CEV}, R_{BE}=50\Omega, T_C=100^\circ\text{C}$		3.0		3.0	mA
I_{EBO}	$V_{EB}=9.0\text{V}$		1.0		1.0	mA
BV_{CEX}	$V_{CL}=\text{Rated } V_{CEX}, I_C=4.5\text{A}, T_C=100^\circ\text{C}$	350		450		V
BV_{CEX}	$V_{CL}=\text{Rated } V_{CEO}=100\text{V}, I_C=8.0\text{A}, T_C=100^\circ\text{C}$	200		300		V
BV_{CEO}	$I_C=100\text{mA}$	300		400		V
$V_{CE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=1.0\text{A}$		1.5		1.5	V
$V_{CE}(\text{SAT})$	$I_C=8.0\text{A}, I_B=2.0\text{A}$		5.0		5.0	V
$V_{CE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=1.0\text{A}, T_C=100^\circ\text{C}$		2.5		2.5	V
$V_{BE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=6.0\text{A}$		1.6		1.6	V
$V_{BE}(\text{SAT})$	$I_C=5.0\text{A}, I_B=1.0\text{A}, T_C=100^\circ\text{C}$		1.6		1.6	V
h_{FE}	$V_{CE}=3.0\text{V}, I_C=2.5\text{A}$	12	60	12	60	
h_{FE}	$V_{CE}=3.0\text{V}, I_C=5.0\text{A}$	7.0	35	7.0	35	
f_T	$V_{CE}=10\text{V}, I_C=300\text{mA}, f=1.0\text{MHz}$	6.0	28	6.0	28	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	75	300	75	300	pF
$I_{s/b}$	$V_{CE}=100\text{V}, t=1.0\text{s}$	0.2		0.2		A
$t_{on}(\text{Resistive Load})$	$V_{CC}=250\text{V}, I_C=5.0\text{A}, I_{B1}=I_{B2}=1.0\text{A}$		1.05		1.05	μs
$t_{OFF}(\text{Resistive Load})$	$V_{CC}=250\text{V}, I_C=5.0\text{A}, I_{B1}=I_{B2}=1.0\text{A}$		5.0		5.0	μs
$t_{OFF}(\text{Inductive Load})$	$V_{CL}=\text{Rated } V_{CEX}, I_C=5.0\text{A}, I_{B1}=1.0\text{A}$					
	$V_{BE}(\text{OFF})=5.0\text{V}, T_C=100^\circ\text{C}$		4.9		4.9	μs
$t_{OFF}(\text{Inductive Load})$	$V_{CL}=\text{Rated } V_{CEX}, I_C=5.0\text{A}, I_{B1}=1.0\text{A}, V_{BE}(\text{OFF})=5.0\text{V}, T_C=25^\circ\text{C}$		1.38TYP		1.38TYP	μs

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