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Manufacturers of World Class Discrete Semiconductors

MPSA62
MPSA63
MPSA64
MPSA65
MPSA66

PNP SILICON DARLINGTON TRANSISTORS

JEDEC TO-92 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPSA62 series types are molded epoxy silicon PNP transistors manufactured by the epitaxial planar process designed for extremely high gain applications.

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

	SYMBOL	MPSA62	MPSA63	MPSA64	MPSA65	MPSA66	UNIT
Collector-Base Voltage	V_{CB0}	20	30	30	30	30	V
Collector-Emitter Voltage	V_{CES}	20	30	30	30	30	V
Emitter-Base Voltage	V_{EBO}	10	10	10	8.0	8.0	V
Collector Current	I_C			500			mA
Power Dissipation	P_D			625			mW
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D			1.5			W
Operating and Storage Junction Temperature	T_J, T_{STG}			-65 to +150			$^\circ\text{C}$
Thermal Resistance	θ_{JA}			200			$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{JC}			83.3			$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS

SYMBOL	TEST CONDITIONS	MPSA62		MPSA63		MPSA64		MPSA65		MPSA66		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
I_{CB0}	$V_{CB}=15\text{V}$		100	-	-	-	-	-	-	-	-	nA
I_{CB0}	$V_{CB}=30\text{V}$		-	100	100	100	100	100	100	100	100	nA
I_{EBO}	$V_{BE}=10\text{V}$		100	100	100	100	-	-	-	-	-	nA
I_{EBO}	$V_{BE}=8.0\text{V}$		-	-	-	-	100	100	100	100	100	nA
BV_{CES}	$I_C=100\mu\text{A}$	20		30		30		30		30		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=.01\text{mA}$		1.0	-	-	-	-	-	-	-	-	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=0.1\text{mA}$		-	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$		1.4	-	-	-	-	-	-	-	-	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$		-	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	20k		5k	10k	10k	50k	50k	75k	75k		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	-		10k	20k	20k	20k	20k	40k	40k		
f_T	$V_{CE}=5.0\text{V}, I_C=100\text{mA},$ $f=100\text{MHz}$			125	125	125	-	-	-	-	-	MHz
f_T	$V_{CE}=10\text{V}, I_C=30\text{mA},$ $f=50\text{MHz}$			-	-	-	100	100	100	100	100	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		2.5 TYP	2.5 TYP	2.5 TYP	2.5 TYP	2.5 TYP	2.5 TYP	2.5 TYP	2.5 TYP	2.5 TYP	pF
NF	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA},$ $R_s=100\text{k}\Omega, f=1.0\text{kHz}$		2.0 TYP	2.0 TYP	2.0 TYP	2.0 TYP	2.0 TYP	2.0 TYP	2.0 TYP	2.0 TYP	2.0 TYP	dB