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Manufacturers of World Class Discrete Semiconductors

MPS8098
MPS8099

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR MPS8098, MPS8099 types are Epoxy Molded Silicon NPN Transistors designed for general purpose audio amplifier applications and complementary circuits. The PNP complementary types are MPS8598 and MPS8599.

MAXIMUM RATINGS ($T_A = 25^oC$)

	SYMBOL	MPS8098	MPS8099	UNITS
Collector-Base Voltage	V_{CBO}	60	80	V
Collector-Emitter Voltage	V_{CEO}	60	80	V
Emitter-Base Voltage	V_{EBO}	6.0	6.0	V
Collector Current	I_C	500	500	mA
Power Dissipation	P_D	625	625	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		^oC
Thermal Resistance	Θ_{JA}	200		$^oC/W$

ELECTRICAL CHARACTERISTICS ($T_A = 25^oC$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MPS8098 MIN	MPS8098 MAX	MPS8099 MIN	MPS8099 MAX	UNITS
I_{CBO}	V_{CB} = Rated V_{CBO}		0.1		0.1	μA
I_{CEO}	V_{CE} = 60V		0.1		0.1	μA
I_{EBO}	V_{BE} = 6.0V		0.1		0.1	μA
BV_{CBO}	I_C = 100μA	60		80		V
BV_{CEO}	I_C = 10mA	60		80		V
BV_{EBO}	I_C = 10μA	6.0		6.0		V
$V_{CE(SAT)}$	I_C = 100mA, I_B = 5.0mA		0.4		0.4	V
$V_{CE(SAT)}$	I_C = 100mA, I_B = 10mA		0.3		0.3	V
$V_{BE(ON)}$	V_{CE} = 5.0V, I_C = 1.0mA	0.5	0.7	-	-	V
$V_{BE(ON)}$	V_{CE} = 5.0V, I_C = 10mA	-	-	0.6	0.8	V
h_{FE}	V_{CE} = 5.0V, I_C = 1.0mA	100	300	100	300	
h_{FE}	V_{CE} = 5.0V, I_C = 10mA	100		100		
h_{FE}	V_{CE} = 5.0V, I_C = 100mA	75		75		
f_T	V_{CE} = 5.0V, I_C = 10mA, f = 100MHz	150		150		MHz
C_{ob}	V_{CB} = 5.0V, I_E = 0, f = 1.0MHz		6.0		6.0	pF
C_{ib}	V_{CB} = 0.5V, I_C = 0, f = 1.0MHz		25		25	pF