



NPN/PNP SILICON PLANAR EPITAXIAL TRANSISTORS



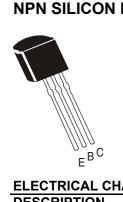
MPSA05,MPSA06 MPSA55,MPSA56

TO-92 Plastic Package

Amplifier Transistors

ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless otherwise specified)

DESCRIPTION	SYMBOL	MPSA05	MPSA06	UNITS	
		MPSA55	MPSA56		
Collector Emitter Voltage	V _{CEO}	60	80	V	
Collector Base Voltage	V _{CBO}	60	80	V	
Emitter Base Voltage	V _{EBO}	4		V	
Collector Current Continuous	I _C	500	mA		
Total Device Dissipation@Ta=25°C	P _D	625	mW		
Derate Above 25°C		5.0)	mW/°C	
Total Device Dissipation@ Tc=25°C	PD	1.5	5	W	
Derate Above 25°C		12		mW/°C	
Operating And Storage Junction	T _j , T _{stg}	-55 to -	+150	°C	
Temperature Range					
THERMAL RESISTANCE					
Junction to ambient	R _{th(j-a) (1)}	200)	°C/mW	
Junction to case	R _{th(j-c)}	83.3	3	°C/mW	
(1) R _{th(j-a}) is measured with the devic	e soldered into a typ	ical printed circuit board.			



TO-92	
	Package

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	V _{CEO} *	I _C =1mA,I _B =0				
MPSA05/55			60			V
MPSA06/56			80			V
Emitter-Base Voltage	V_{EBO}	I _E =100uA, I _C =0	4.0			V
Collector-Cut off Current	I _{CBO}					
MPSA05/55		V _{CB} =60V, I _E = 0			0.1	uA
MPSA06/56		V _{CB} =80V, I _E = 0			0.1	uA
Collector-Cut off Current	I _{CEO}	V _{CE} =60V,I _B =0			0.1	uA
Collector-Emitter (sat) Voltage	V _{CE} (sat)	I _C =100mA,I _B =10mA			0.25	V
Base-Emitter(on) Voltage	V _{BE} (on)	I _C =100mA,V _{CE} =1V			1.2	V
DC Current Gain						uA
	h_{FE}	V _{CE} =1V,I _C =10mA	100			
		V _{CE} =1V,I _C =100mA	100			
ELECTRICAL CHARACTERISTICS (1						
DESCRIPTION	SYMBOL	TEST CONDITION	MIN		MAX	UNITS
DYNAMIC CHARACTERISTICS						
Transition Frequency						
NPN	f _T **	I _C =10mA, V _{CE} =2V f=100MHz	100			MHz

I_C=100mA, V_{CE}=1V

f=100MHz

50

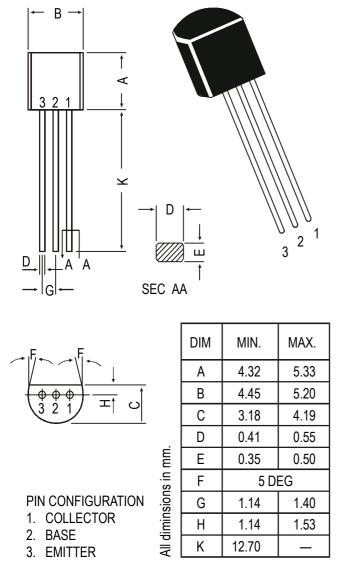
*Pulse Test : Pulse Width < 300us, Duty Cycle < 2%.

** f_T is defined as the frequency at which $Ih_{fe}I$ extrapolates to unity.

PNP

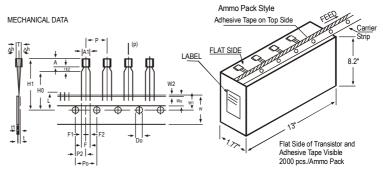
MHz

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TO-92 Transistors on Tape and Ammo Pack



All dimensions in mm unless specified otherwise

ITEM		SPECIFICATION			DELLADIZA	
ITEM	SYMBOL	MIN. NOM. M		MAX.	TOL .	REMARKS
BODY WIDTH BODY HEIGHT BODY THICKNESS	A1 A T	4.0 4.8 3.9	40.7	4.8 5.2 4.2		
PITCH OF COMPONENT FEED HOLE PITCH	P Po		12.7 12.7		±1 ±0.3	CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	TO BE MEASURED AT BOTTOM OF CLINCH
DISTANCE BETWEEN OUTER LEADS COMPONENT ALIGNMENT TAPE WIDTH HOLD-DOWN TAPE WIDTH HOLE POSITION	F △h W Wo W1		5.08 0 18 6 9	1	+0.6 -0.2 ±0.5 ±0.2 +0.7 -0.5	AT TOP OF BODY
HOLD-DOWN TAPE POSITION LEAD WIRE CLINCH HEIGHT COMPONENT HEIGHT LENGTH OF SNIPPED LEADS FEED HOLE DIAMETER TOTAL TAPE THICKNESS LEAD - TO - LEAD DISTANCEF1,	W2 Ho H1 L Do t F2		0.5 16 4 2.54	23.25 11.0 1.2	±0.2 ±0.5 ±0.2 +0.4	t1 0.3 - 0.6
CLINCH HEIGHT PULL - OUT FORCE	H2 (P)	6N		3	-0.1	

1. MAXIMUM ALIGNMENT DEVIATION BETWEEN LEADS NOT TO BE GREATER THAN 0.2 mm.

2. MAXIMUM NON-CUMULATIVE VARIATION BETWEEN TAPE FEED HOLES SHALL NOT EXCEED 1 mm IN 20 PITCHES

3. HOLDDOWN TAPE NOT TO EXCEED BEYOND THE EDGE(S) OF CARRIER TAPE AND THERE SHALL BE NO EXPOSURE OF ADHESIVE. 4. NO MORE THAN 3 CONSECUTIVE MISSING COMPONENTS ARE PERMITTED.

A TAPE TRAILER, HAVING AT LEAST THREE FEED HOLES ARE REQUIRED AFTER THE LAST COMPONENT.
SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-92 Bulk TO-92 T&A	1K/polybag 2K/ammo box	200 gm/1K pcs 645 gm/2K pcs	3" x 7.5" x 7.5" 12.5" x 8" x 1.8"	5.0K 2.0K	17" x 15" x 13.5" 17" x 15" x 13.5"	80.0K 32.0K	23 kgs 12.5 kgs

MPSA05,MPSA06 MPSA55,MPSA56

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Disclaimer

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MPS05_06_55_56REV081001

Data Sheet