

Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company





NPN/PNP SILICON PLANAR EPITAXIAL TRANSISTORS



MPSA05,MPSA06 MPSA55,MPSA56

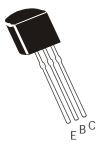
TO-92 **Plastic Package**

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

DESCRIPTION	SYMBOL	MPSA05 MPSA55	MPSA06 MPSA56	UNITS
		WIF SASS	WF 3A30	
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	P_D	1.5		W
Derate Above 25°C		12	1	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	°C/mW

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ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	. TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	V _{CFO} *	$I_C=1$ mA, $I_B=0$				
MPSA05/5	020	, b	60			V
MPSA06/5			80			V
Emitter-Base Voltage	V_{EBO}	I_E =100uA, I_C =0	4.0			V
Collector-Cut off Current	I_{CBO}					
MPSA05/5	5	$V_{CB} = 60 V, I_{E} = 0$			0.1	uA
MPSA06/5	6	$V_{CB} = 80V, I_{E} = 0$			0.1	uA
Collector-Cut off Current	I_{CEO}	V_{CE} =60 V , 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	$V_{BE}(on)$	$I_C=100$ mA, $V_{CE}=1$ V			1.2	V
DC Current Gain	, ,	-				uA
	h_{FE}	V_{CE} =1 V , I_{C} =10 mA	100			
		$V_{CE}=1V,I_{C}=100mA$	100			
ELECTRICAL CHARACTERISTICS	Ta=25°C U	nless Otherwise Spec	cified)			
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	•	MAX	UNITS

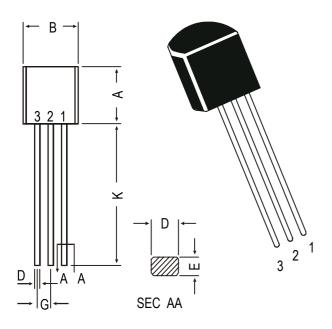
DESCRIPTION	,		L 1E31 CONDITION	IVIIIN	IVIAA	UNITS
DYNAMIC CHARACTERISTIC	CS					
Transition Frequency						
. ,	NPN	f_T^{**}	I_C =10mA, V_{CE} =2V	100		MHz
			f=100MHz			
	PNP		I_C =100mA, V_{CE} =1V	50		MHz
			f=100MHz			

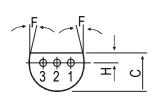
^{*}Pulse Test : Pulse Width ≤ 300us, Duty Cycle ≤ 2%.

^{**} f_T is defined as the frequency at which $lh_{fe}l$ extrapolates to unity.

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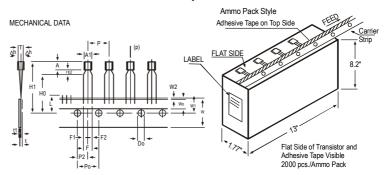


	DIM	MIN.	MAX.		
	Α	4.32	5.33		
	В	4.45	5.20		
	С	3.18	4.19		
	D	0.41	0.55		
шш	Е	0.35	0.50		
s.i	F	5 DI	EG		
sion	G	1.14	1.40		
II diminsions in mm.	Н	1.14	1.53		
р =	К	12.70			

PIN CONFIGURATION

- 1. COLLECTOR
- 2. BASE
- 3. EMITTER

TO-92 Transistors on Tape and Ammo Pack



All dimensions in mm unless specified otherwise

ITEM		SPECIFICATION					
IIEM	SYMBOL	MIN.	NOM.	MAX.	TOL.	REMARKS	
BODY WIDTH BODY HEIGHT BODY THICKNESS	A1 A T	4.0 4.8 3.9		4.8 5.2 4.2			
PITCH OF COMPONENT FEED HOLE PITCH	P Po	0.0	12.7 12.7		±1 ±0.3	CUMULATIVE PITCH ERROR 1.0 mm/20	
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	PITCH 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	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		0.5 16 4 2.54	23.25 11.0 1.2	±0.2 ±0.5 ±0.2 +0.4 -0.1	t1 0.3 - 0.6	
CLINCH HEIGHT PULL - OUT FORCE	H2 (P)	6N		3	-0.1		

- NOTES

 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.
- 5. A TAPE TRAILER, HAVING AT LEAST THREE FEED HOLES ARE REQUIRED AFTER THE LAST COMPONENT. 6. SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.

Packing Detail

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

Notes

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Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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