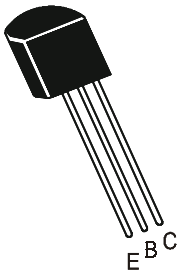
NPN/PNP SILICON PLANAR AMPLIFIER TRANSISTORS

MPS650 , MPS651 (NPN)
MPS750 , MPS751 (PNP)
TO -92
CBE



AMPLIFIER TRANSISTORS

ABSOLUTE MAXIMUM RATINGS.

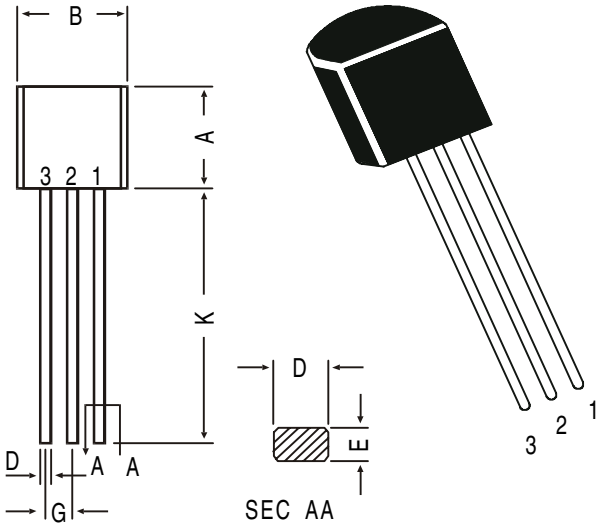
DESCRIPTION	SYMBOL	MPS650 MPS750	MPS651 MPS751	UNITS
Collector -Emitter Voltage	VCEO	40	60	V
Collector -Base Voltage	VCBO	60	80	V
Emitter -Base Voltage	VEBO	5.0		V
Collector Current Continuous	IC	2.0		A
Power Dissipation @Ta=25 degC	PD	625		mW
Derate Above 25deg C		5.0		mW/deg C
Power Dissipation @Tc=25 degC	PD	1.5		W
Derate Above 25deg C		12.0		mW/deg C
Operating And Storage Junction Temperature Range	Tj, Tstg	-55 to +150		deg C
THERMAL RESISTANCE				
Junction to Case	Rth(j-c)	83.3		deg C/W
Junction to Ambient	Rth(j-a)	200		deg C/W

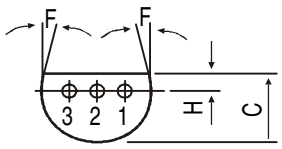
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MPS650 MPS750	MPS651 MPS751	UNITS
Collector -Emitter Voltage	VCEO*	IC=10mA,IB=0	>40	>60	V
Collector -Base Voltage	VCBO	IC=100uA, IE=0	>60	>80	V
Emitter -Base Voltage	VEBO	IE=10uA, IC=0	>5.0	>5.0	V
Collector-Cut off Current	ICBO	VCB=60V, IE=0	<100	-	nA
		VCB=80V, IE=0	-	<100	nA
Emitter-Cut off Current	IEBO	VEB=4V, IC=0	<100	<100	nA
DC Current Gain	hFE*	IC=50mA, VCE=2V	>75	>75	
		IC=500mA, VCE=2V	>75	>75	
		IC=1A, VCE=2V	>75	>75	
		IC=2A, VCE=2V	>40	>40	
Collector Emitter Saturation Voltage	VCE(Sat)*	IC=2A, IB=200mA	<0.50	<0.50	V
		IC=1A, IB=100mA	<0.30	<0.30	V
Base Emitter on Voltage	VBE(on)*	IC=1A, VCE=2V	<1.0	<1.0	V
Base Emitter Saturation Voltage	VBE(Sat)*	IC=1A, IB=100mA	<1.2	<1.2	V
Current Gain-Bandwidth Product	ft**	IC=50mA, VCE=5V f=100MHz	>75	>75	MHz

***Pulse Condition : Length =300us, Duty Cycle=2%**
****ft is defined as the frequency at which /hfe/ extrapolates to unity**

TO-92 Plastic Package





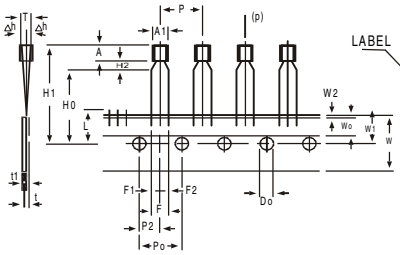
PIN CONFIGURATION
1. COLLECTOR
2. BASE
3. EMITTER

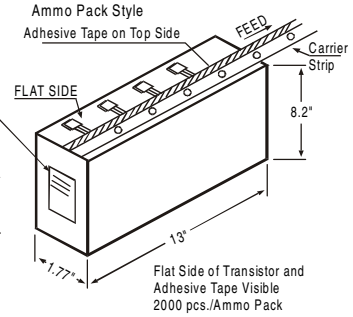
All diminsions in mm.

DIM	MIN.	MAX.
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5 DEG	
G	1.14	1.40
H	1.14	1.53
K	12.70	—

TO-92 Transistors on Tape and Ammo Pack

MECHANICAL DATA





All dimensions in mm unless specified otherwise

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

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

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

Customer Notes

Disclaimer

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