



MPS2924/FTSO2924

T-29-23

NPN Small Signal General Purpose Amplifier

- V_{CEO} 25 V (Min)
- h_{FE} ... 150-300 @ 2.0 mA

PACKAGE
MPS2924 TO-92
FTSO2924 TO-236AA/AB

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures
Storage Temperature -55° C to 150° C
Operating Junction Temperature 150° C

Power Dissipation (Notes 2 & 3)

	MPS	FTSO
Total Dissipation at 25° C Ambient Temperature	0.625 W	0.350 W*
70° C Ambient Temperature	0.400 W	
25° C Case Temperature	1.0 W	

Voltages & Currents

V_{CEO} Collector to Emitter Voltage (Note 4)	25 V
V_{CBO} Collector to Base Voltage	25 V
V_{EBO} Emitter to Base Voltage	5.0 V
I_C Collector Current	100 mA

ELECTRICAL CHARACTERISTICS (25° C Ambient Temperature unless otherwise noted) (Note 5)

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
I_{CBO}	Collector Cutoff Current		500 15	nA μA	$V_{CB} = 25 V, I_E = 0$ $V_{CB} = 25 V, I_E = 0, T_A = 100^\circ$
I_{EBO}	Emitter Cutoff Current		500	nA	$V_{EB} = 5.0 V, I_C = 0$
h_{fe}	Small Signal Current Gain	150	300		$V_{CE} = 10 V, I_C = 2.0 mA, f = 1.0 kHz$
C_{ob}	Output Capacitance		12	pF	$V_{CB} = 10 V, I_E = 0, f = 1.0 MHz$

NOTES:

- These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
 - These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
 - These ratings give a maximum junction temperature of 150° C and (TO-92) junction-to-case thermal resistance of 125° C/W (derating factor of 8.0 mW/° C); junction-to-ambient thermal resistance of 200° C/W (derating factor of 5.0 mW/° C); (TO-236) junction-to-ambient thermal resistance of 357° C/W (derating factor of 2.8 mW/° C).
 - Rating refers to a high current point where collector to emitter voltage is lowest.
 - For product family characteristic curves, refer to Curve Set T144.
- * Package mounted on 99.5% alumina 8 mm x 8 mm x 0.6 mm.