



**MPS2924/FTSO2924** T-29-23  
 NPN Small Signal General  
 Purpose Amplifier

- $V_{CE0}$  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**

$V_{CE0}$ 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 $\mu$ A	$V_{CB} = 25$ 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:**

1. These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
  2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
  3. 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).
  4. Rating refers to a high current point where collector to emitter voltage is lowest.
  5. 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.