

**MPS6518/FTSO6518**

PNP Small Signal General Purpose Amplifier

T-29-23

- V_{CEO} ... 40 V (Min)
- h_{FE} ... 150-300 @ 2.0 mA, 90 (Min) @ 100 mA

PACKAGE

MPS6518

TO-92

FTSO6518

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)

Total Dissipation at	MPS	FTSO
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	-40 V
	(Note 4)	
V_{CBO}	Collector to Base Voltage	-40 V
V_{EBO}	Emitter to Base Voltage	-4.0 V
I_C	Collector Current	100 mA

ELECTRICAL CHARACTERISTICS (25° C Ambient Temperature unless otherwise noted) (Note 6)

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
BV_{CEO}	Collector to Emitter Breakdown Voltage	-40		V	$I_C = 0.5$ mA, $I_B = 0$
BV_{EBO}	Emitter to Base Breakdown Voltage	-4.0		V	$I_E = 10$ μ A, $I_C = 0$
I_{CBO}	Collector Cutoff Current		50 1.0	nA μ A	$V_{CB} = -30$ V, $I_E = 0$ $V_{CB} = -30$ V, $I_E = 0$, $T_A = 60^\circ$ C
h_{FE}	DC Current Gain (Note 5)	150 90	300		$I_C = 2.0$ mA, $V_{CE} = -10$ V $I_C = 100$ mA, $V_{CE} = -10$ V
$V_{CE(sat)}$	Collector to Emitter Saturation Voltage (Note 5)		-0.5	V	$I_C = 50$ mA, $I_B = 5.0$ mA
C_{ob}	Output Capacitance		4.0	pF	$V_{CB} = -10$ V, $I_E = 0$, $f = 100$ kHz

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. Pulse conditions: length = 300 μ s; duty cycle = 1%
6. For product family characteristic curves, refer to Curve Set T215.

* Package mounted on 99.5% alumina 8 mm x 8 mm x 0.6 mm.