

MF8 6 2

The item can replace BF862



Approved by:
Checked by:
Issued by:

SPECIFICATION

PRODUCT: N -channel junction FET

MODEL: MF 8 6 2 SOT23

HOPE MICROELECTRONIC CO.,LIMITED

N-channel junction FET

MF862

FEATURES

- High transition frequency for excellent sensitivity in AM car radios
- High transfer admittance.

APPLICATIONS

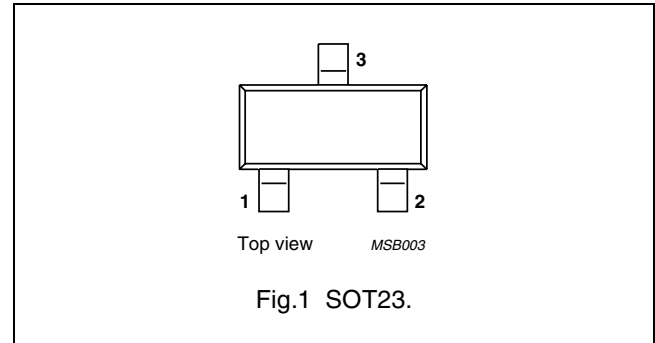
- Pre-amplifiers in AM car radios.

DESCRIPTION

Silicon N-channel symmetrical junction field-effect transistor in a SOT23 package.
Drain and source are interchangeable.

PINNING SOT23

PIN	DESCRIPTION
1	source
2	drain
3	gate



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_{DS}	drain-source voltage		–	–	20	V
$V_{GS (off)}$	gate-source cut-off voltage		–	–0.7	–	V
I_{DSS}	drain-source current		10	–	25	mA
P_{tot}	total power dissipation	$T_s \leq 92\text{ }^\circ\text{C}$	–	–	225	mW
$ y_{fs} $	transfer admittance		30	40	–	mS
T_j	junction temperature		–	–	150	$^\circ\text{C}$

CAUTION

This product is supplied in anti-static packing to prevent damage caused by electrostatic discharge during transport and handling. For further information, refer to Philips specs.: SNW-EQ-608, SNW-FQ-302A and SNW-FQ-302B.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134)

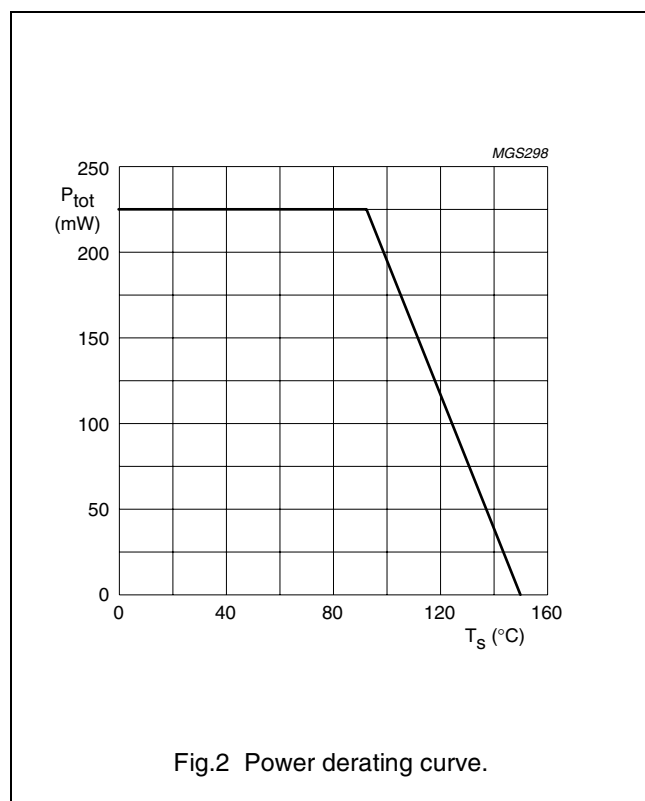
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{DS}	drain-source voltage		–	20	V
V_{DG}	drain-gate voltage		–	20	V
V_{GS}	gate-source voltage		–	–20	V
I_{DS}	drain-source current		–	40	mA
I_G	forward gate current		–	10	mA
P_{tot}	total power dissipation	$T_s \leq 92\text{ }^\circ\text{C}$	–	225	mW
T_{stg}	storage temperature		–65	+150	$^\circ\text{C}$
T_j	junction temperature		–	150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-s}$	thermal resistance from junction to soldering point	note 1	260	K/W

Notes

1. Soldering point of the gate lead.



STATIC CHARACTERISTICS

$T_j = 25\text{ }^\circ\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_{(BR)GSS}$	gate-source breakdown voltage	$I_{GS} = -1\text{ }\mu\text{A}; V_{DS} = 0$	-20	-	-	V
V_{GS}	gate-source forward voltage	$V_{DS} = 0; I_G = 1\text{ mA}$	-	-	1	V
$V_{GS(off)}$	gate-source cut-off voltage	$V_{DS} = 8\text{ V}; I_D = 1\text{ }\mu\text{A}$	-	-0.7	-	V
I_{GSS}	reverse gate current	$V_{GS} = -15\text{ V}; V_{DS} = 0$	-	-	-1	nA
I_{DSS}	drain-source current	$V_{GS} = 0; V_{DS} = 8\text{ V}$	10	-	25	mA

DYNAMIC CHARACTERISTICS

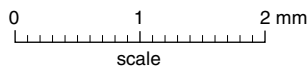
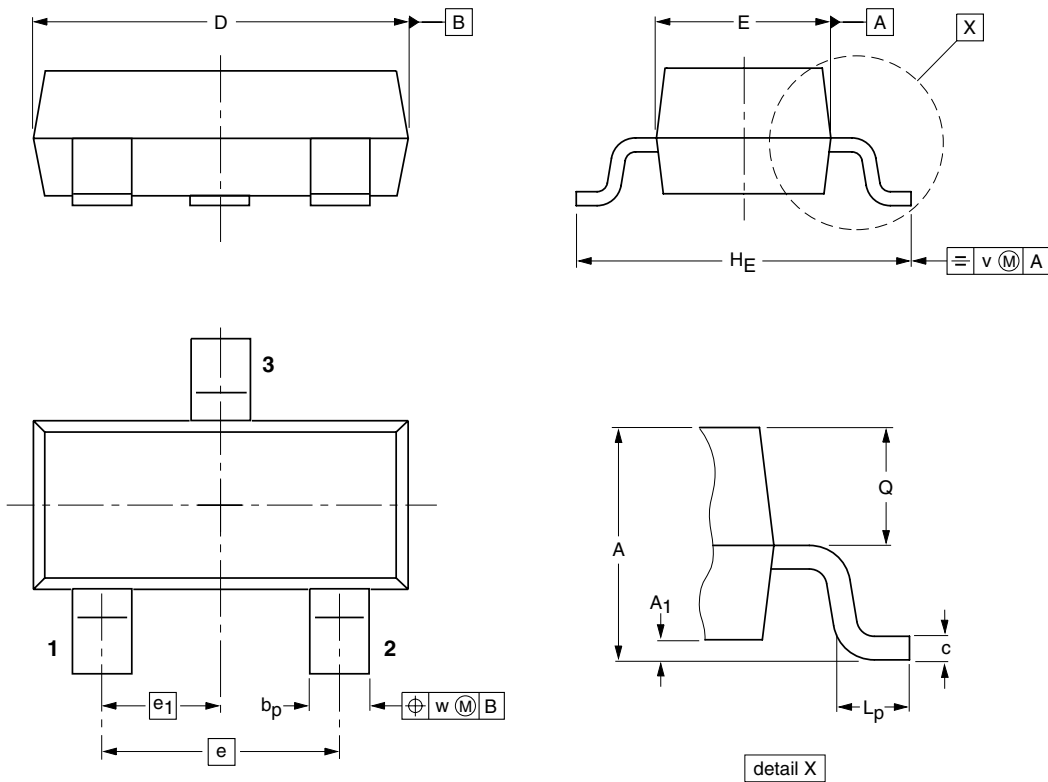
Common source; $T_{amb} = 25\text{ }^\circ\text{C}$; $V_{GS} = 0$; $V_{DS} = 8\text{ V}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$ y_{fs} $	common source forward transfer admittance	$T_j = 25\text{ }^\circ\text{C}$	30	40	-	mS
g_{os}	common source output conductance	$T_j = 25\text{ }^\circ\text{C}$	-	-	400	μS
C_{iss}	input capacitance	$f = 1\text{ MHz}$	-	10	-	pF
C_{rss}	reverse transfer capacitance	$f = 1\text{ MHz}$	-	2.5	-	pF
e_n	equivalent noise input voltage	$f = 100\text{ kHz}$	-	0.8	-	$\text{nV}/\sqrt{\text{Hz}}$
f_T	transition frequency		-	640	-	MHz

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23						97-02-28