

PNP Epitaxial Silicon Transistor

KSA1298

Low Frequency Power Amplifier

- Complement to KSC3265

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-800	mA
I_B	Base Current	-160	mA
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

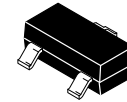
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{ mA}$, $I_B = 0$	-25	-	-	V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -1\text{ mA}$, $I_C = 0$	-5	-	-	V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -30\text{ V}$, $I_E = 0$	-	-	-100	nA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = -5\text{ V}$, $I_C = 0$	-	-	-100	nA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = -1\text{ V}$, $I_C = -100\text{ mA}$ $V_{CE} = -1\text{ V}$, $I_C = -800\text{ mA}$	100 40	-	320 -	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{ mA}$, $I_B = -20\text{ mA}$	-	-	-0.4	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = -1\text{ V}$, $I_C = -10\text{ mA}$	-0.5	-	-0.8	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{ V}$, $I_C = -10\text{ mA}$	-	120	-	MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$	-	13	-	pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

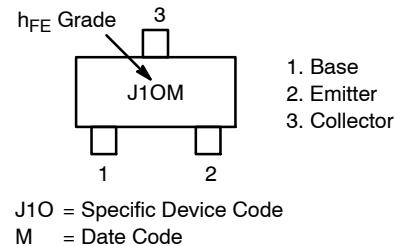
h_{FE1} Classification

Classification	O	Y
h_{FE1}	100 ~ 200	160 ~ 320



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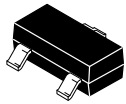
MARKING DIAGRAM



ORDERING INFORMATION

Device	Package	Shipping
KSA1298YMTF	SOT-23 (Pb-Free)	3000 / Tape & Reel

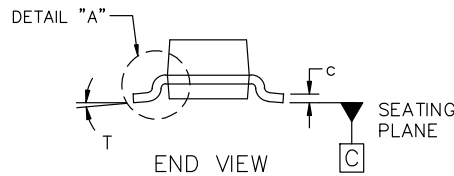
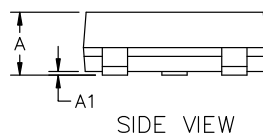
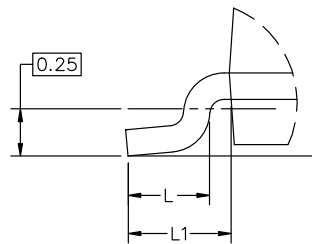
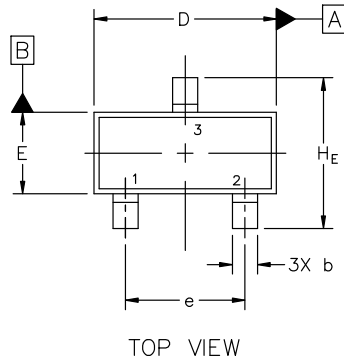
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.



SCALE 4:1

SOT-23 (TO-236) 2.90x1.30x1.00 1.90P
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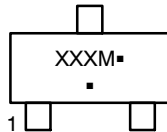
DATE 14 AUG 2024



MILLIMETERS			
DIM	MIN	NOM	MAX
A	0.89	1.00	1.11
A1	0.01	0.06	0.10
b	0.37	0.44	0.50
c	0.08	0.14	0.20
D	2.80	2.90	3.04
E	1.20	1.30	1.40
e	1.78	1.90	2.04
L	0.30	0.43	0.55
L1	0.35	0.54	0.69
HE	2.10	2.40	2.64
T	0°	---	10°

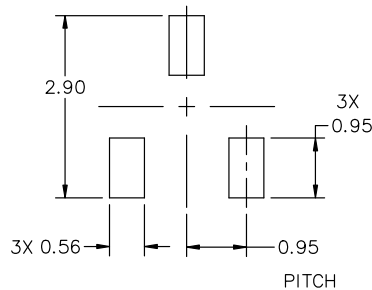
NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSIONS: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF THE BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

GENERIC MARKING DIAGRAM*


XXX = Specific Device Code
M = Date Code
▪ = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.


RECOMMENDED MOUNTING FOOTPRINT

* For additional information on our Pb-Free strategy and soldering details, please download the onsemi Soldering and Mounting Techniques Reference Manual, SOLDERM/D.

STYLES ON PAGE 2

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STYLE 1 THRU 5: CANCELLED	STYLE 6: PIN 1. BASE 2. EMITTER 3. COLLECTOR	STYLE 7: PIN 1. EMITTER 2. BASE 3. COLLECTOR	STYLE 8: PIN 1. ANODE 2. NO CONNECTION 3. CATHODE		
STYLE 9: PIN 1. ANODE 2. ANODE 3. CATHODE	STYLE 10: PIN 1. DRAIN 2. SOURCE 3. GATE	STYLE 11: PIN 1. ANODE 2. CATHODE 3. CATHODE-ANODE	STYLE 12: PIN 1. CATHODE 2. CATHODE 3. ANODE	STYLE 13: PIN 1. SOURCE 2. DRAIN 3. GATE	STYLE 14: PIN 1. CATHODE 2. GATE 3. ANODE
STYLE 15: PIN 1. GATE 2. CATHODE 3. ANODE	STYLE 16: PIN 1. ANODE 2. CATHODE 3. CATHODE	STYLE 17: PIN 1. NO CONNECTION 2. ANODE 3. CATHODE	STYLE 18: PIN 1. NO CONNECTION 2. CATHODE 3. ANODE	STYLE 19: PIN 1. CATHODE 2. ANODE 3. CATHODE-ANODE	STYLE 20: PIN 1. CATHODE 2. ANODE 3. GATE
STYLE 21: PIN 1. GATE 2. SOURCE 3. DRAIN	STYLE 22: PIN 1. RETURN 2. OUTPUT 3. INPUT	STYLE 23: PIN 1. ANODE 2. ANODE 3. CATHODE	STYLE 24: PIN 1. GATE 2. DRAIN 3. SOURCE	STYLE 25: PIN 1. ANODE 2. CATHODE 3. GATE	STYLE 26: PIN 1. CATHODE 2. ANODE 3. NO CONNECTION
STYLE 27: PIN 1. CATHODE 2. CATHODE 3. CATHODE	STYLE 28: PIN 1. ANODE 2. ANODE 3. ANODE				

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