

# NPN Epitaxial Silicon Transistor

## KSC3265

### Low Frequency Power Amplifier

- Complement to KSA1298

### 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.

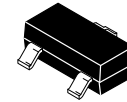
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

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	$V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$ $V_{CE} = 6\text{ V}$ , $I_C = 800\text{ mA}$	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.

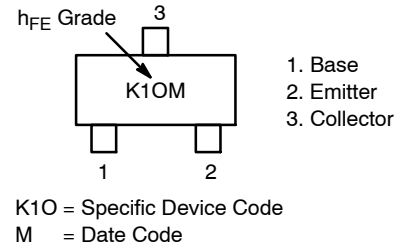
### $h_{FE1}$ Classification

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



SOT-23  
CASE 318

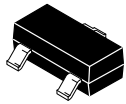
### MARKING DIAGRAM



### ORDERING INFORMATION

Device	Package	Shipping
KSC3265YMTF	SOT-23 (Pb-Free)	3000 / Tape & Reel

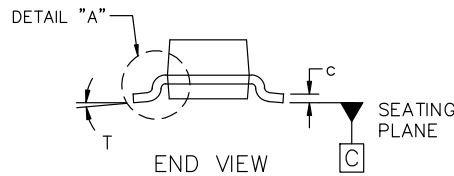
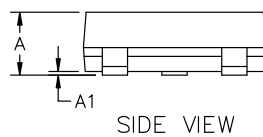
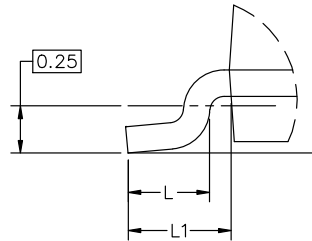
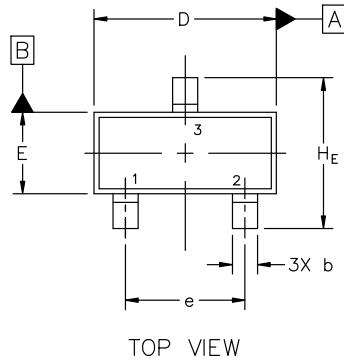
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.



SCALE 4:1

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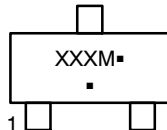
DATE 14 AUG 2024



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°

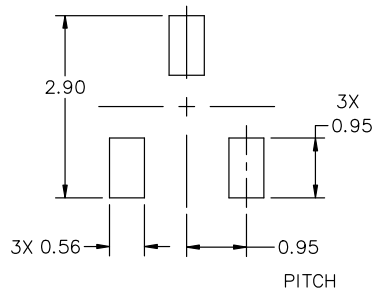
## NOTES:

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, SOLDERRM/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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