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NPN Epitaxial Silicon Transistor

Low Frequency Power Amplifier

KSD2012

- Complementary to KSB1366
- This is a Pb–Free Device

ABSOLUTE MAXIMUM RATINGS (T_C = 25° C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	7	V
Ι _C	Collector Current	3	А
Ι _Β	Base Current	0.3	А
P _C	Collector Power Dissipation (T _C = 25° C)	25	W
TJ	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C

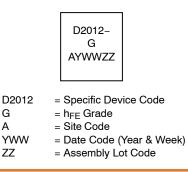
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



Base
Collector
Emitter

TO-220 Fullpack CASE 221AT

MARKING DIAGRAM



ORDERING INFORMATION

Device	Package	Shipping [†]
KSD2012GTU	TO-220 Fullpack (Pb-Free)	1000 Units / Tube

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

			Value			
Symbol	Parameter	Test Condition	Min	Тур	Мах	Unit
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = 50 mA, I _B = 0	60	-	-	V
I _{CBO}	Collector Cut-off Current	$V_{CB} = 60 \text{ V}, I_E = 0$	-	-	100	μA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 7 \text{ V}, I_{C} = 0$	-	-	10	μA
h _{FE1} h _{FE2}	DC Current Gain	$V_{CE} = 5 \text{ V}, I_C = 0.5 \text{ A}$ $V_{CE} = 5 \text{ V}, I_C = 3 \text{ A}$	100 20	-	320	-
V _{CE} (sat)	Collector-Emitter Saturation Voltage	$I_{\rm C} = 2$ A, $I_{\rm B} = 0.2$ A	-	0.4	1	V
V _{BE} (on)	Base-Emitter ON Voltage	$V_{CE} = 5 \text{ V}, \text{ I}_{C} = 0.5 \text{ A}$	-	0.7	1	V
f _T	Current Gain Bandwidth Product	$V_{CE} = 5 \text{ V}, \text{ I}_{C} = 0.5 \text{ A}$	-	3	-	MHz

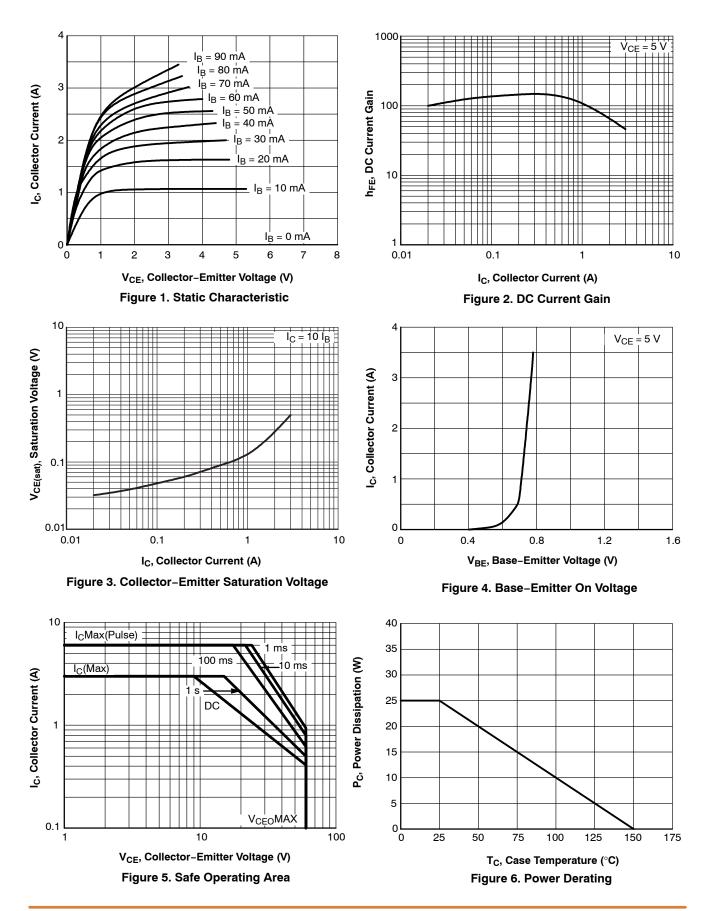
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

h_{FE} CLASSIFICATION

Classification	Y	G
h _{FE1}	100 ~ 200	150 ~ 320

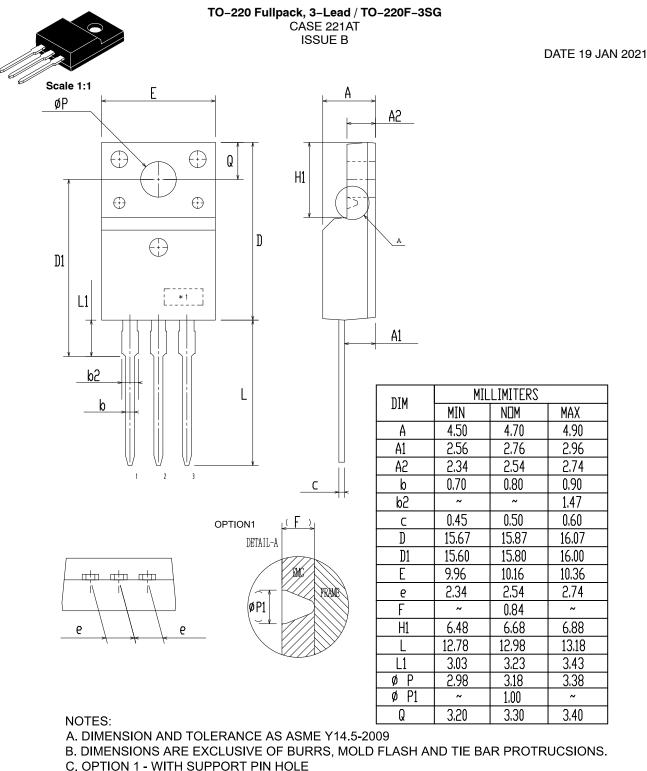
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TYPICAL CHARACTERISTICS





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OPTION 2 - NO SUPPORT PIN HOLE

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DESCRIPTION:	TO-220 FULLPACK, 3-LEAD / TO-220F-3SG		PAGE 1 OF 1

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