

NPN Epitaxial Silicon Transistor

KSC2690A

Features

- Complement to KSA1220A
- This is a Pb-Free Device

Applications

- Audio Frequency
- High Frequency Power Amplifier

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

Symbol	Parameter	Ratings	Units
V _{CBO}	Collector-Base Voltage	160	V
V _{CEO}	Collector-Emitter Voltage	160	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current (DC)	1.2	Α
I _{CP}	Collector Current (Pulse) *	2.5	Α
Ι _Β	Base Current (DC)	0.3	Α
P _C	Collector Dissipation, $T_A = 25^{\circ}C$ $T_C = 25^{\circ}C$	1.2 20	W
TJ	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 150	°C

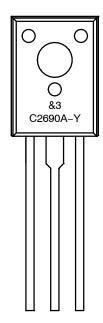
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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TO-126-3LD CASE 340AS

MARKING DIAGRAM



&3 = 3-Digit Date Code C2690A-Y = Specific Device Code

ORDERING INFORMATION

Device	Package	Shipping
KSC2690AYS	TO-126-3LD (Pb-Free)	2000 Units / Bulk Bag
KSC2690AYSTU	TO-126-3LD (Pb-Free)	1920 Units / Tube

^{*}PW ≤ 10 ms, Duty Cycle ≤ 50%

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

Symbol	Characteristic	Test Condition	Min	Тур	Max	Unit
I _{CBO}	Collector Cut-off Current	V _{CB} = 120 V, I _E = 0			1	μΑ
I _{EBO}	Emitter Cut-off Current	V _{EB} = 3 V, I _C = 0			1	μΑ
h _{FE1} h _{FE2}	DC Current Gain*	$V_{CE} = 5 \text{ V}, I_{C} = 5 \text{ mA}$ $V_{CE} = 5 \text{ V}, I_{C} = 0.3 \text{ A}$	35 60	105 140	320	
V _{CE} (sat)	Collector-Emitter Saturation Voltage*	I _C = 1 A, I _B = 0.2 A		0.4	0.7	V
V _{BE} (sat)	Base-Emitter Saturation Voltage*	I _C = 1 A, I _B = 0.2 A		1	1.3	V
f _T	Current Gain Bandwidth Product	V _{CE} = 5 V, I _C = 0.2 A		155		MHz
C _{ob}	Output Capacitance	V _{CB} = 10 V, I _E = 0, f = 1 MHz		19		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. *Pulse Test: PW \leq 350 μ s, Duty Cycle \leq 2% Pulsed

$h_{\mbox{\scriptsize FE}}$ CLASSIFICATION

Classification	R	0	Υ
h _{FE2}	60 ~ 120	100 ~ 200	160 ~ 320

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TYPICAL CHARACTERISTICS

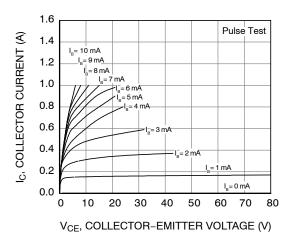


Figure 1. Static Characteristic

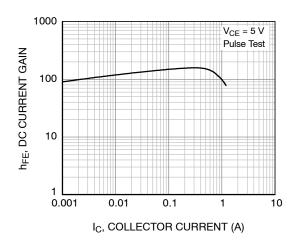


Figure 2. DC Current Gain

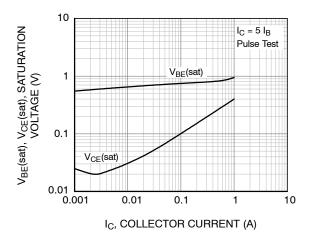


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

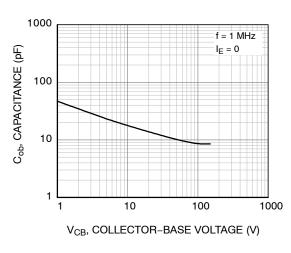


Figure 4. Collector Output Capacitance

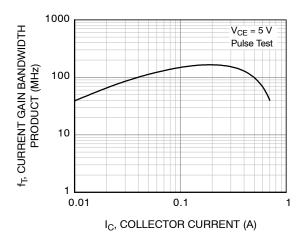


Figure 5. Current Gain Bandwidth Product

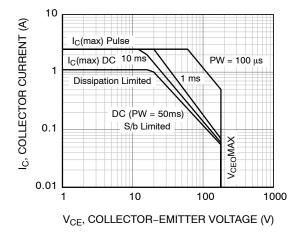


Figure 6. Safe Operating Area

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TYPICAL CHARACTERISTICS (Continued)

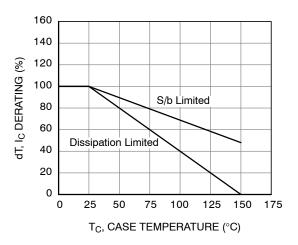


Figure 7. Derating Curve of Safe Operating Areas

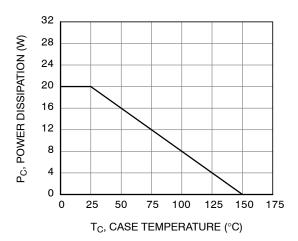
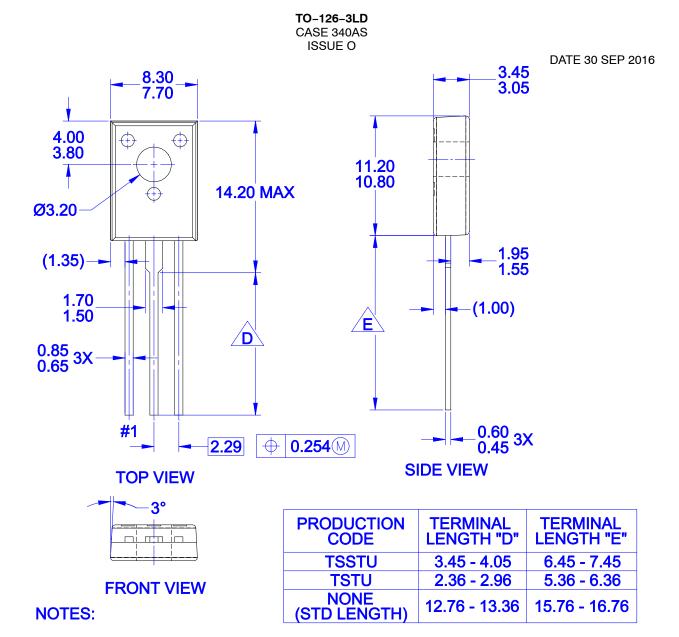


Figure 8. Power Derating





- A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS



E FOR TERMINAL LENGTH "E", REFER TO TABLE

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