



Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Audio frequency power amplifier & medium speed switching
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:D1616 X

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage		
	KSD1616	50	V
V_{CBO}	Collector-Base Voltage		
	KSD1616	60	V
V_{EBO}	Emitter-Base Voltage	6.0	V
	KSD1616A	120	V
I_C	Collector Current (DC)	1.0	A
I_{CP}	Collector Current (Pulse) ⁽¹⁾	2.0	A
P_C	Collector power dissipation	0.75	W
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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OFF CHARACTERISTICS

I_{CBO}	Collector Cutoff Current ($V_{CB}=60$ Vdc, $I_E=0$)	---	---	100	nAdc
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=6.0$ Vdc, $I_E=0$)	---	---	100	nAdc

ON CHARACTERISTICS

h_{FE-1}	DC Current Gain ($I_E=100$ mAdc, $V_{CE}=2.0$ Vdc)				
	KSD1616	135	---	600	
	KSD1616A	135	---	400	---
h_{FE-2}	DC Current Gain ($V_{CE}=2.0$ Vdc, $I_E=1.0$ Adc)	81	---	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ⁽²⁾ ($I_E=1.0$ Adc, $I_B=50$ mAdc)	---	0.15	0.3	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ⁽²⁾ ($I_E=1.5$ Adc, $I_B=75$ mAdc)	---	0.9	1.2	Vdc
$V_{BE(ON)}$	Base-Emitter On Voltage ⁽²⁾ ($V_{CE}=2.0$ Vdc, $I_E=50$ mAdc)	600	640	700	mVdc
f_T	Current Gain Bandwidth Product ($I_E=100$ mAdc, $V_{CE}=2.0$ Vdc)	100	160	---	MHz
C_{ob}	Collector Output Capacitance ($V_{CE}=10$ Vdc, $I_E=0$, $f=1.0$ MHz)	---	19	---	pF
T_{ON}	Turn On Time	$V_{CC}=10$ V, $I_C=100$ mA,	0.07	---	us
t_{STG}	Storage Time	$I_{B1}=I_{B2}=10$ mA, $V_{BE(off)}=2\sim 3$ V	0.95	---	us
T_F	Fall Time		0.07	---	us

h_{FE} Classification

Classification	Y	G	L
h_{FE-1}	135-270	200-400	300-600

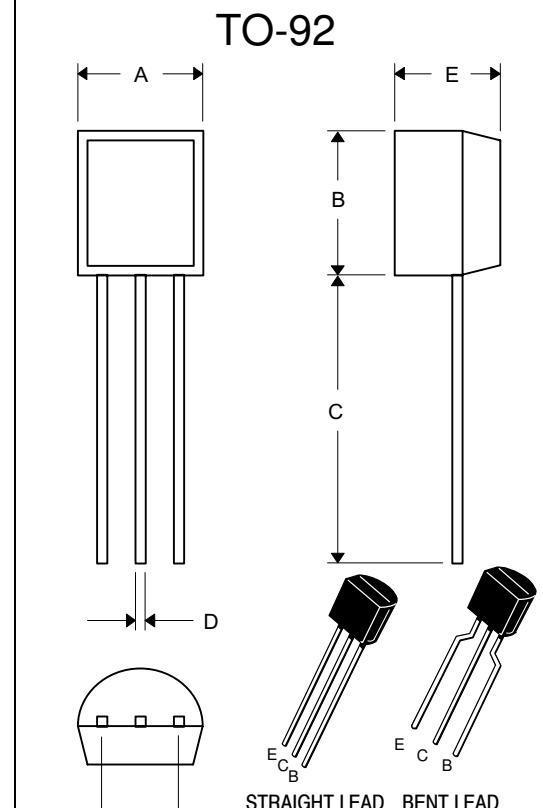
(1) PW<10ms, Duty Cycle<50%

(2) Pulse Test: PW<350us, Duty Cycle<2% Pulsed

KSD1616-Y/G/L

KSD1616A-Y/G

NPN Silicon Epitaxial Transistors



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	--	12.70	--	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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