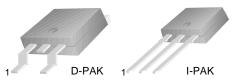


## **KSH127**

### **D-PAK for Surface Mount Applications**

- High DC Current Gain
- Built-in a Damper Diode at E-C
- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, " I " Suffix)
- Electrically Similar to Popular TIP127
- Complement to KSH122

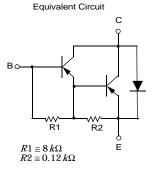


1.Base 2.Collector 3.Emitter

## **PNP Silicon Darlington Transistor**

### **Absolute Maximum Ratings** $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	- 100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	- 100	V
V <sub>EBO</sub>	Emitter-Base Voltage	- 5	V
I <sub>C</sub>	Collector Current (DC)	- 8	Α
I <sub>CP</sub>	Collector Current (Pulse)	- 16	Α
I <sub>B</sub>	Base Current	- 120	mA
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	20	W
	Collector Dissipation (T <sub>a</sub> =25°C)	1.75	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature - 65		°C



### Electrical Characteristics T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V <sub>CEO</sub> (sus)	*Collector-Emitter Sustaining Voltage	$I_C = -30 \text{mA}, I_B = 0$	- 100		V
I <sub>CEO</sub>	Collector Cut-off Current	$V_{CE} = -50V, I_{B} = 0$		- 10	μΑ
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB} = -100V, I_{E} = 0$		- 10	μΑ
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB} = -5V, I_{C} = 0$		- 2	mA
h <sub>FE</sub>	*DC Current Gain	V <sub>CE</sub> = - 4V, I <sub>C</sub> = - 4A V <sub>CE</sub> = - 4V, V <sub>EB</sub> = -8A	1000 100	12K	
V <sub>CE</sub> (sat)	*Collector-Emitter Saturation Voltage	$I_C = -4A, I_B = -16mA$ $I_C = -8A, I_B = -80mA$		- 2 - 4	V V
V <sub>BE</sub> (sat)	*Base-Emitter Saturation Voltage	I <sub>C</sub> = -8A, I <sub>B</sub> = -80mA		- 4.5	V
V <sub>BE</sub> (on)	*Base-Emitter On Voltage	$V_{CE} = -4V, I_{C} = -4A$		- 2.8	V
C <sub>ob</sub>	Output Capacitance	$V_{CB} = -10V, I_{E} = 0$ f= 0.1MHz		300	pF

<sup>\*</sup> Pulse Test: PW≤300μs, Duty Cycle≤2%

# **Typical Characteristics**

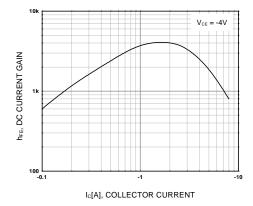


Figure 1. DC current Gain

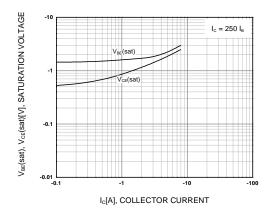


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

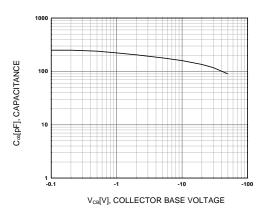


Figure 3. Collector Output Capacitance

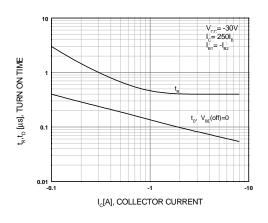


Figure 4. Turn On Time

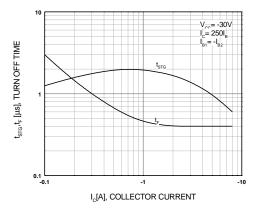


Figure 5. Turn Off Time

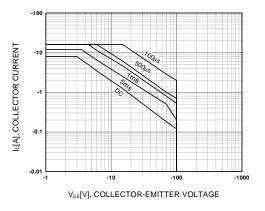


Figure 6. Safe Operating Area

# Typical Characteristic (Continued)

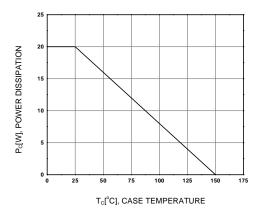
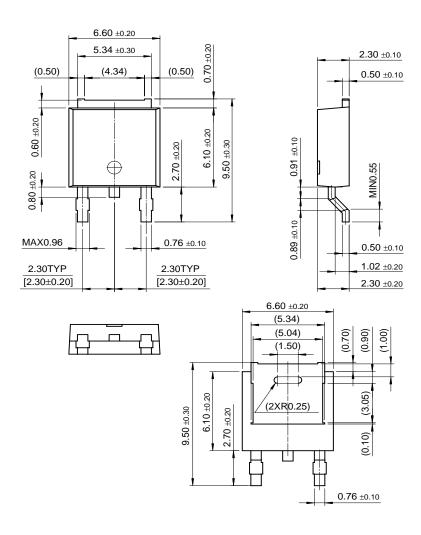


Figure 7. Power Derating

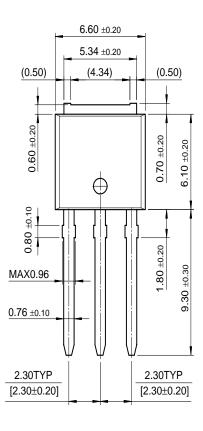
## **Package Dimensions**

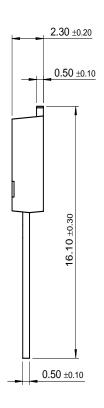
## D-PAK



## Package Dimensions (Continued)

## I-PAK







Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
$CROSSVOLT^{TM}$	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	$I^2C^{TM}$	$OCX^{TM}$	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET <sup>®</sup>
The Power Franchise™		OPTOLOGIC <sup>®</sup>	SILENT SWITCHER®	VCX <sup>TM</sup>
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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