

isc Silicon NPN Darlington Power Transistor

KSD560

DESCRIPTION

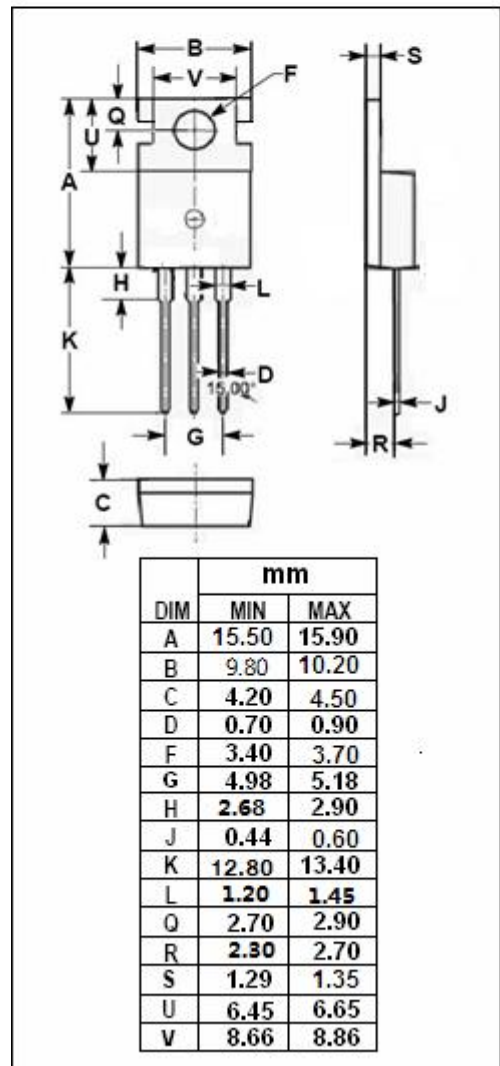
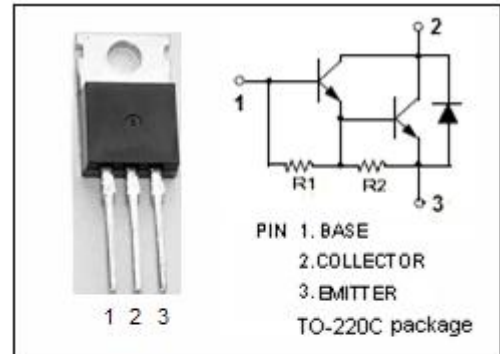
- Collector-Emitter Sustaining Voltage-
: $V_{CEQ(SUS)} = 100V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 2000(\text{Min}) @ I_C = 3.0A$
- Low Saturation Voltage
- Complement to Type KSB601
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifiers and low speed switching applications

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CP}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	30	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**KSD560****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 10mA; I _B =0	100			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 3mA		0.9	1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3A; I _B = 3mA		1.6	2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 100V; I _E =0			1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0			3	mA
h _{FE-1}	DC Current Gain	I _C = 3A ; V _{CE} = 2V	2000	6000	15000	
h _{FE-2}	DC Current Gain	I _C = 5A ; V _{CE} = 2V	500			

◆ h_{FE-1} Classifications

R	O	Y
2000-5000	3000-7000	5000-15000

Switching times

t _{on}	Turn-on Time	I _C = 3A , I _{B1} = I _{B2} = 3mA R _L = 16.7 Ω ; V _{CC} ≈50V		1.0		μ s
t _{stg}	Storage Time			3.5		μ s
t _f	Fall Time			1.2		μ s

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