

isc Silicon NPN Darlington Power Transistor

2SD1608

DESCRIPTION

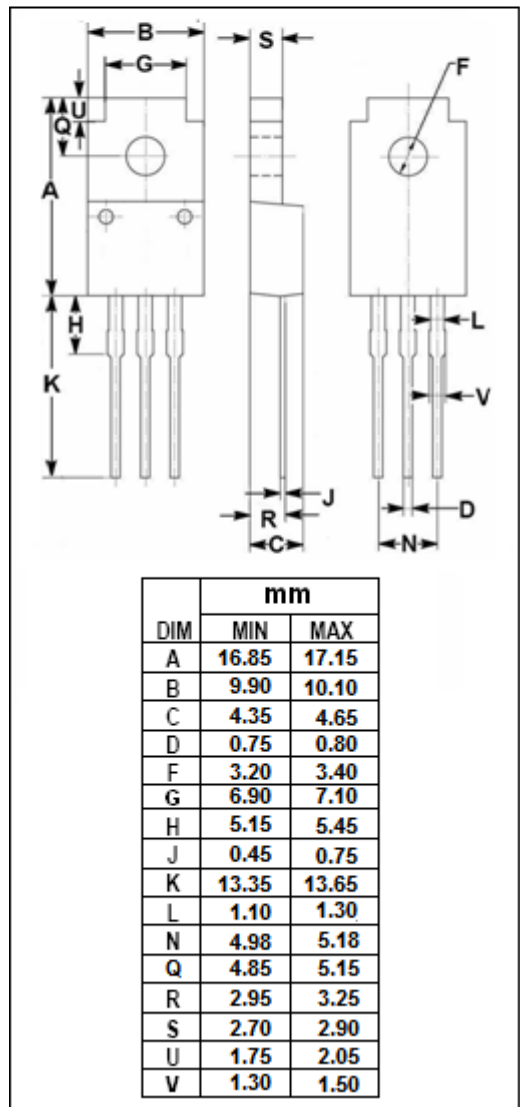
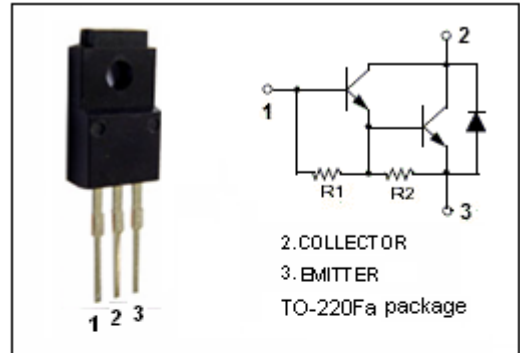
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 120V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 1000(\text{Min}) @ I_C = 4A$
- High Speed Switching

APPLICATIONS

- Designed for medium speed power switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	8	A
I_{CP}	Collector Current-Peak	12	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	50	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1608****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 2A; L= 10mH$	120			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 4A; I_B= 8mA$			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 8A; I_B= 80mA$			3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C= 4A; I_B= 8mA$			2.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C= 8A; I_B= 80mA$			3.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 120V; I_E= 0$			100	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 100V; I_B= 0$			10	μA
h_{FE}	DC Current Gain	$I_C= 4A; V_{CE}= 3V$	1000		20000	

Switching times

t_{on}	Turn-on Time	$I_C= 4A, I_{B1}= -I_{B2}= 8mA$		0.7		μs
t_{stg}	Storage Time			6.0		μs
t_f	Fall Time			2.0		μs