

Complementary Silicon Power Ttransistors

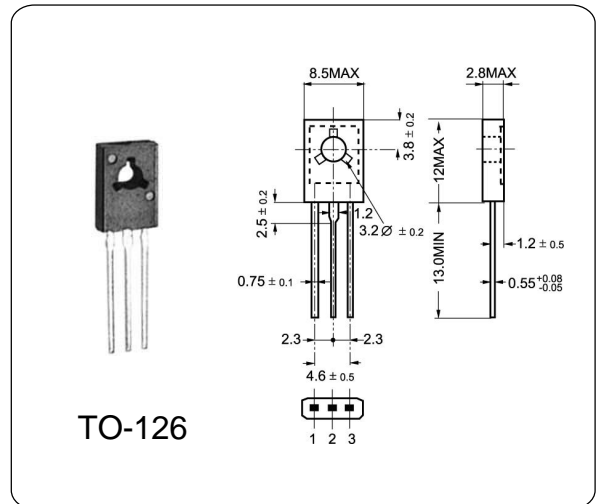
2SD1691 / 2SB1151

DESCRIPTION

It is intended for use in power amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

Parameter	I	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	7.0	V
Collector Current	I_C	5.0	A
Collector Peak Current	$I_{C(peak)}$	8.0	A
Total Dissipation at	P_{tot}	20	W
Max. Operating Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C



ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=50V, I_E=0$	—	—	10	uA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=7.0V, I_C=0$	—	—	10	uA
Collector-Emitter Sustaining Voltage	V_{CEO}	$I_C=10mA, I_B=0$	60	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V, I_C=0.1A$	60	—	—	
	$h_{FE(2)}$	$V_{CE}=1.0V, I_C=2.0A$	100	—	400	
	$h_{FE(3)}$	$V_{CE}=1.0V, I_C=5.0A$	50	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0A, I_B=0.2A$	—	—	0.3	V
Base - Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2.0A, I_B=0.2A$	—	—	1.2	V
Storage Time	t_{stg}	$I_C=2.0A, I_{B1}=-I_{B2}=0.2A$	—	—	2.5	us

hfe(2): M 100~200, L 160~320, K 200~400