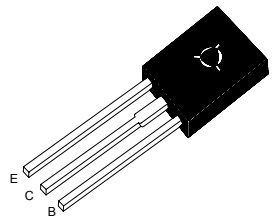
ST 2SD1691T

NPN Silicon Epitaxial Power Transistor

For Low-Frequencey Power Amplifiers and Mid-Speed Switching

The transistor is subdivided into three groups, M, L and K, according to its DC-DC current gain.



TO-126 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	7	V
Collector Current	$I_{C(DC)}$	5	A
Base Current	$I_{B(DC)}$	1	A
Collector Current (pulse) [1)]	$I_{C(pulse)}$	8	A
Total power dissipation (T_a = 25 °C)	P_{tot}	1.3	W
Total power dissipation (T_c = 25 °C)	P_{tot}	20	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

[1)] PW 10ms, duty cycle 50%.

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 1 V, I_C = 2 A					
Current Gain Group	M	h_{FE}	100	200	-
	L	h_{FE}	160	320	-
	K	h_{FE}	200	400	-
at V_{CE} = 1 V, I_C = 0.1 A		h_{FE}	60	-	-
at V_{CE} = 1 V, I_C = 5 A		h_{FE}	50	-	-
Collector Cutoff Current at V_{CB} = 50 V		I_{CBO}	-	10	µA
Emitter Cutoff Current at V_{EB} = 7 V		I_{EBO}	-	10	µA
Base Saturation Voltage at I_C = 2 A, I_B = 0.2 A		$V_{BE(sat)}$	-	1.2	V
Collector Saturation Voltage at I_C = 2 A, I_B = 0.2 A		$V_{CE(sat)}$	-	0.3	V
Turn-on time	at I_C = 2 A, I_{B1} = -I_{B2} = 0.2 A, R_L = 5 Ω, V_{CC} = 10 V	T_{on}	-	1	µs
Storage time		T_{stg}	-	2.5	µs
Fall time		t_f	-	1	µs

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ISO/TS 16949 : 2009 Certificate No. 05103 | ISO14001 : 2004 Certificate No. 7116 | ISO 9001 : 2008 Certificate No. 0506098 | BS-OHSAS 18001 : 2007 Certificate No. 7116 | IECQ QC 080000

Dated : 22/03/2006