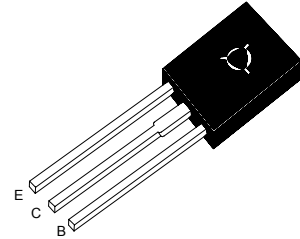


ST 2SD1691T

NPN Silicon Epitaxial Power Transistor For Low-Frequency 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-18 Plastic Package

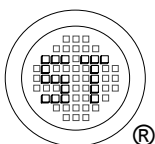
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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 ($T_a = 25^\circ\text{C}$)	P_{tot}	1.3	W
Total power dissipation ($T_c = 25^\circ\text{C}$)	P_{tot}	20	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$

¹⁾ $PW \leq 10\text{ms}$, duty cycle $\leq 50\%$.

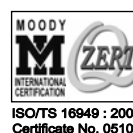
Characteristics at $T_a = 25^\circ\text{C}$

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



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



Dated : 22/03/2006