SGS-THOMSON MICROELECTRONICS

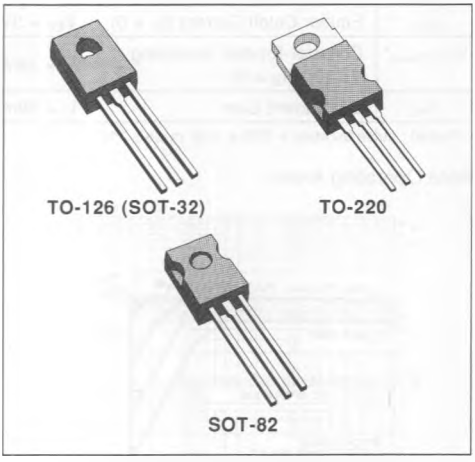
MJE340/T/SGS340
MJE350/T/SGS350

HIGH VOLTAGE POWER TRANSISTORS

DESCRIPTION

The MJE340, MJE340T, SGS340 are silicon epitaxial planar NPN transistors intended for use in medium power linear and switching applications. They are respectively mounted in TO-125, TO-220 and SOT-82 package.

The complementary PNP types are respectively the MJE350, MJE350T, SGS350.



INTERNAL SCHEMATIC DIAGRAMS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-emitter Voltage (I_B = 0)	300	V
V_{EBO}	Emitter-base Voltage (I_C = 0)	3	V
I_C	Collector Current	0.5	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25°C$	20.8	W
T_{stg}	Storage Temperature	– 65 to 150	°C
T_j	Junction Temperature	150	°C

THERMAL DATA

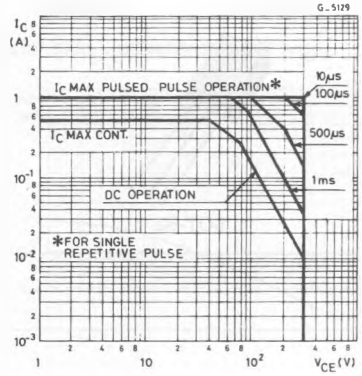
$R_{th\ j\text{-}case}$	Thermal Resistance Junction-case	Max	6.0	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise specified)

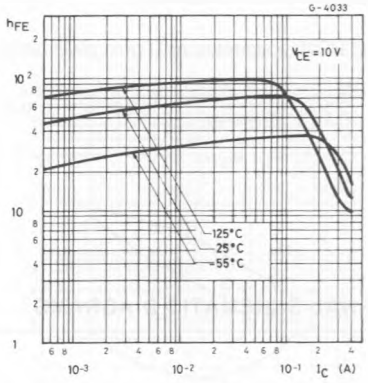
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current (I_E = 0)	V_{CB} = 300V			100	µA
I_{EBO}	Emitter Cutoff Current (I_C = 0)	V_{EB} = 3V			100	µA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 1mA	300			V
h_{FE}	DC Current Gain	I_C = 50mA V_{CE} = 10V	30		240	

* Pulsed : pulse duration = 300µs, duty cycle ≤ 2%.

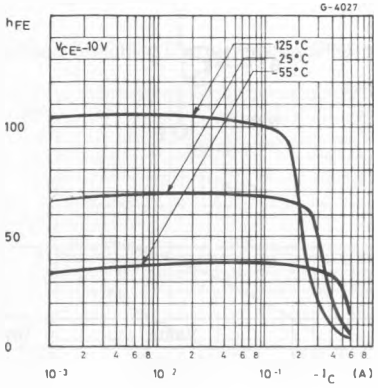
Safe Operating Areas.



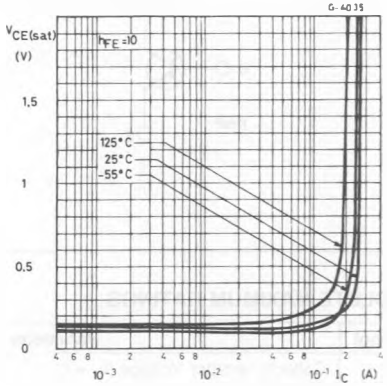
DC Current Gain (NPN).



DC Current Gain (PNP).



Collector-emitter Saturation Voltage (NPN).



Collector-emitter Saturation Voltage (PNP).