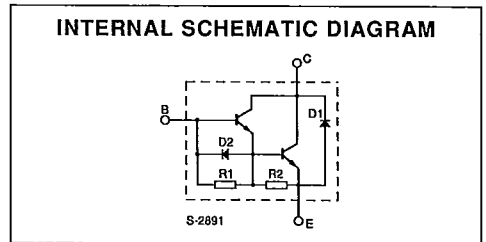
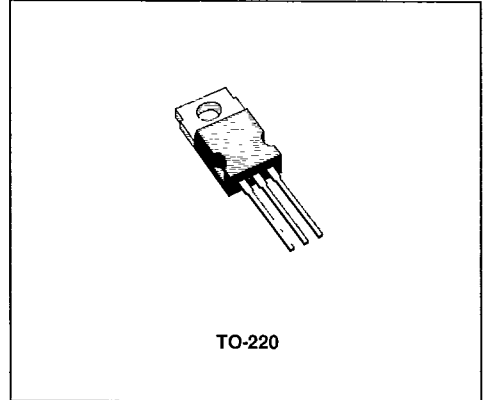


DESCRIPTION

Monolithic Darlingtons with integrated speed-up and damper diode, suited for TV applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		BU184	BU189	
V _{CB0}	Collector-base Voltage (I _E = 0)	400	330	V
V _{CEx}	Collector-emitter Voltage	400	330	V
V _{CE0}	Collector-emitter Voltage (I _B = 0)	200	150	V
V _{EB0}	Emitter-base Voltage (I _C = 0)	8		V
I _C	Collector Current	8		A
I _{CM}	Collector Peak Current (t _p < 10ms)	15		A
I _B	Base Current	2		A
I _{BM}	Base Peak Current (t _p < 10ms)	4		A
P _{tot}	Total Dissipation at T _c < 25°C	60		W
T _{stg}	Storage Temperature	- 65 to + 150		°C
T _j	Max. Operating Junction Temperature	150		°C

THERMAL DATA

S G S-THOMSON

30E D

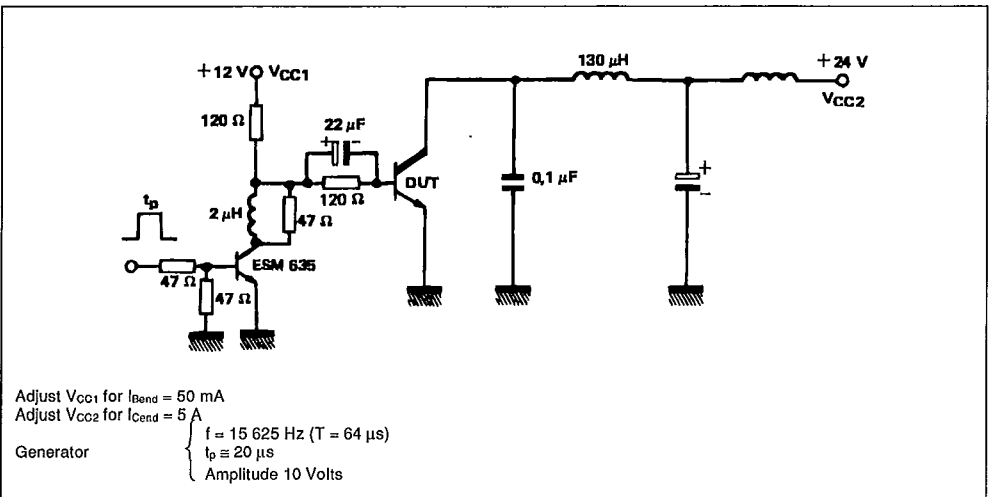
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	2.08	°C/W
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

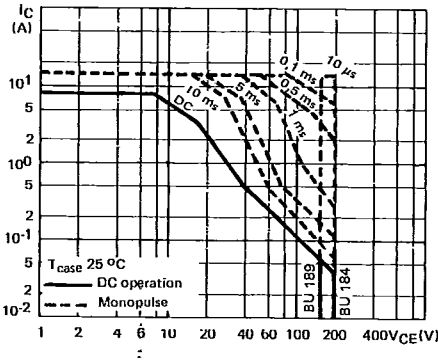
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX}	Collector Cutoff Current	$V_{CE} = V_{CEX}$ $V_{BE} = -6V$			100	μA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = -8V$			10	mA
$V_{CE(sus)}$	Collector Emitter Sustaining Voltage	$I_C = 3A$ $L = 15mH$ for BU184 for BU189	200 150			V V
$V_{CE(sat)}$	Collector-emitter Saturation Voltage	$I_C = 5A$ $I_B = 50mA$			1.5	V
$V_{BE(sat)}$	Base-emitter Saturation Voltage	$I_C = 5A$ $I_B = 50mA$			2.2	V
V_F	Diode Forward Voltage	$I_F = 4A$		1.8	2.3	V
t_s t_f	RESISTIVE LOAD Storage Time Fall Time	See Test Circuit		0.44 0.3	0.5	μs μs

* Pulse test $t_p < 300 \mu s$ $\delta < 2 \%$.

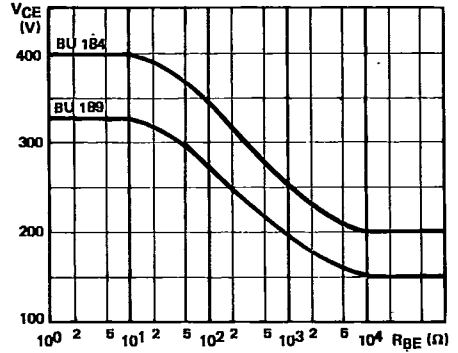
TEST CIRCUIT



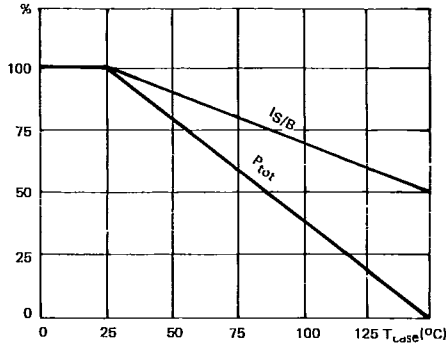
DC and Pulse Area.



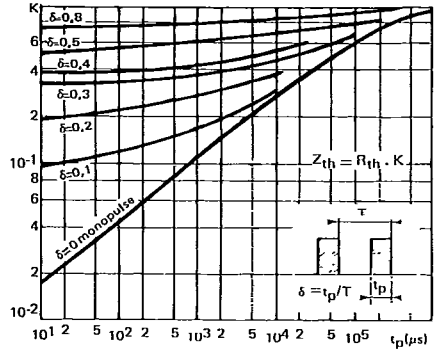
Collector-emitter Voltage vs Base-emitter Resistance.



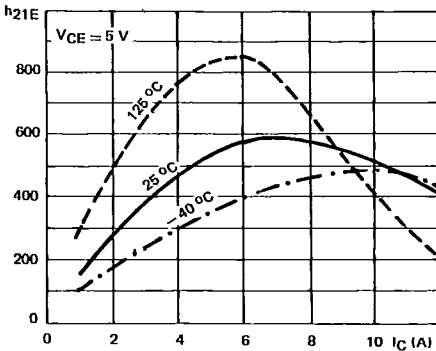
Power and IS/B Derating vs Case Temperature.



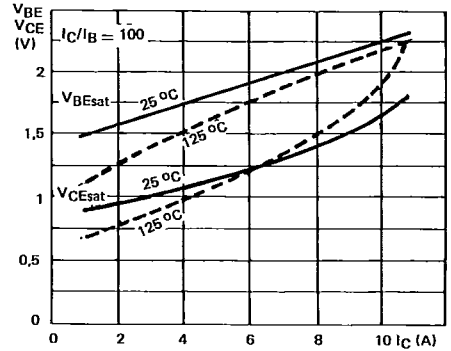
Transient Thermal Response.



DC Current Gain.



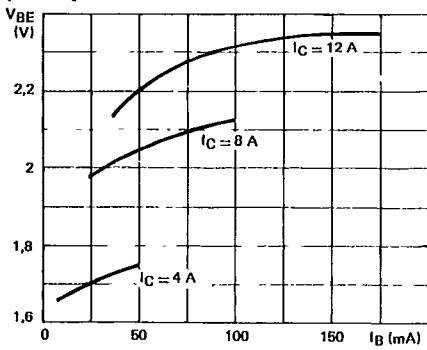
Saturation Voltage.



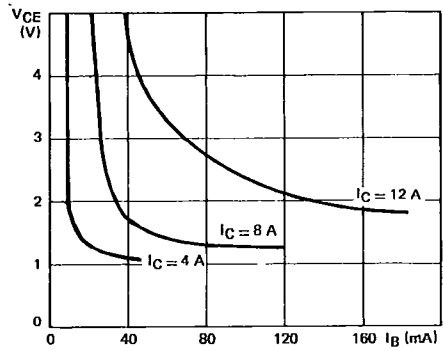
SGS-THOMSON

30E D

Base Characteristics.



Collector Saturation Region.



SGS-THOMSON

30E D