

Silicon Diffused Power Transistor
BU2508AF
GENERAL DESCRIPTION

Enhanced performance, new generation, high-voltage, high-speed switching npn transistor in a plastic full-pack envelope intended for use in horizontal deflection circuits of colour television receivers. Features exceptional tolerance to base drive and collector current load variations resulting in a very low worst case dissipation.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_{CESM}	Collector-emitter voltage peak value	$V_{BE} = 0\text{ V}$	-	1500	V
V_{CEO}	Collector-emitter voltage (open base)		-	700	V
I_C	Collector current (DC)		-	8	A
I_{CM}	Collector current peak value		-	15	A
P_{tot}	Total power dissipation	$T_{hs} \leq 25\text{ °C}$	-	45	W

LIMITING VALUES

Limiting values in accordance with the Absolute Maximum Rating System (IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CESM}	Collector-emitter voltage peak value	$V_{BE} = 0\text{ V}$	-	1500	V
V_{CEO}	Collector-emitter voltage (open base)		-	700	V
I_C	Collector current (DC)		-	8	A
I_{CM}	Collector current peak value		-	15	A
I_B	Base current (DC)		-	4	A
P_{tot}	Total power dissipation	$T_{hs} \leq 25\text{ °C}$	-	45	W
T_{stg}	Storage temperature		-65	150	°C
T_j	Junction temperature		-	150	°C

CHARACTERISTICS

$T_{hs} = 25\text{ °C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CES}	Collector cut-off current ²	$V_{BE} = 0\text{ V}; V_{CE} = V_{CESMmax}$	-	-	1.0	mA
I_{CES}		$V_{BE} = 0\text{ V}; V_{CE} = V_{CESMmax}$	-	-	2.0	mA
I_{EBO}	Emitter cut-off current	$T_j = 125\text{ °C}$	-	-	1.0	mA
BV_{EBO}	Emitter-base breakdown voltage	$V_{EB} = 7.5\text{ V}; I_C = 0\text{ A}$	7.5	13.5	-	V
$V_{CEOsust}$	Collector-emitter sustaining voltage	$I_B = 1\text{ mA}$	700	-	-	V
h_{FE}	DC current gain	$I_B = 0\text{ A}; I_C = 100\text{ mA};$ $L = 25\text{ mH}$	-	13	-	
h_{FE}		$I_C = 100\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = 4.5\text{ A}; V_{CE} = 1\text{ V}$	4	5.5	7.0	