

Silicon Diffused Power Transistor
BU2520DX
GENERAL DESCRIPTION

New generation, high-voltage, high-speed switching npn transistor with an integrated damper diode in a full plastic envelope intended for use in horizontal deflection circuits of large screen colour television receivers.

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)		-	800	V
I_C	Collector current (DC)		-	10	A
I_{CM}	Collector current peak value		-	25	A
P_{tot}	Total power dissipation	$T_{hs} \leq 25 \text{ }^\circ\text{C}$	-	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)		-	800	V
I_C	Collector current (DC)		-	10	A
I_{CM}	Collector current peak value		-	25	A
I_B	Base current (DC)		-	6	A
P_{tot}	Total power dissipation	$T_{hs} \leq 25 \text{ }^\circ\text{C}$	-	45	W
T_{stg}	Storage temperature		-55	150	$^\circ\text{C}$
T_j	Junction temperature		-	150	$^\circ\text{C}$

CHARACTERISTICS
 $T_{hs} = 25 \text{ }^\circ\text{C}$ 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	$V_{EB} = 7.5 \text{ V}; I_C = 0 \text{ A}$	100	-	300	mA
BV_{EBO}	Emitter-base breakdown voltage	$I_B = 600 \text{ mA}$	6	13.5	-	V
R_{be}	Base-emitter resistance	$V_{EB} = 7.5 \text{ V}$	-	50	-	Ω
$V_{CEOsust}$	Collector-emitter sustaining voltage	$I_B = 0 \text{ A}; I_C = 100 \text{ mA}; L = 25 \text{ mH}$	800	-	-	V
h_{FE}	DC current gain	$I_C = 1.0 \text{ A}; V_{CE} = 5 \text{ V}$	-	13	-	
h_{FE}		$I_C = 6 \text{ A}; V_{CE} = 5 \text{ V}$	5	7	9.5	