DIGITRON SEMICONDUCTORS

BYT13-600 – BYT13-1000 FAST RECOVERY RECTIFIER DIODES

MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
I_{FRM}	Repetitive peak forward current	$t_p \leq 20\mu S$	50	A
$I_{F(AV)}$	Average forward current *	$T_A = 55°C$ $\delta = 0.5$	3	A
I_{FSM}	Surge non-repetitive forward current	$t_p = 10ms$ sinusoidal	100	A
P_{tot}	Power dissipation *	$T_A = 55°C$	3.75	W
T_{stg} T_J	Storage and junction temperature range		-40 to +150	°C
T_L	Maximum lead temperature for soldering during 10s at 4mm from case		230	°C
$R_{th\ (j-a)}$	Junction-ambient *		25	°C/W

* On infinite heatsink with 10mm lead length

Symbol	Parameter	BYT13-			Unit
		600	800	1000	
V_{RRM}	Repetitive peak reverse voltage	600	800	1000	V

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_R	$T_J = 25°C$	$V_R = V_{RRM}$			20	µA
V_F		$I_F = 3A$			1.3	V

RECOVERY CHARACTERISTICS

symbol	Test Conditions				Min.	Typ.	Max.	Unit
t_{rr}	$T_J = 25°C$	$I_F = 0.5A$	$I_R = 1A$	$I_{rr} = 0.25A$			150	ns

Figure 1. Maximum average power dissipation versus average forward current.

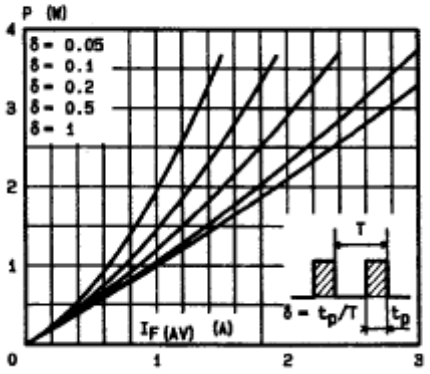

Figure 2. Average forward current versus ambient temperature.

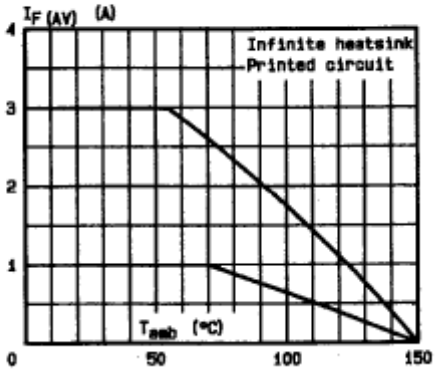

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Figure 3. Thermal resistance versus lead length.

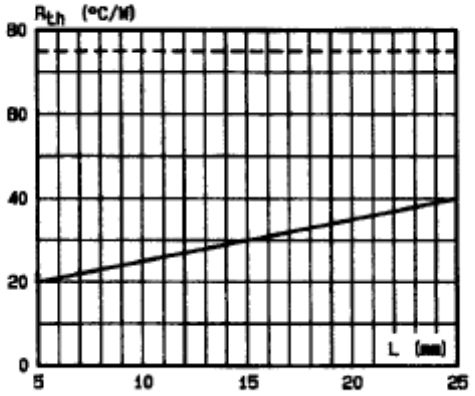


Figure 4. Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

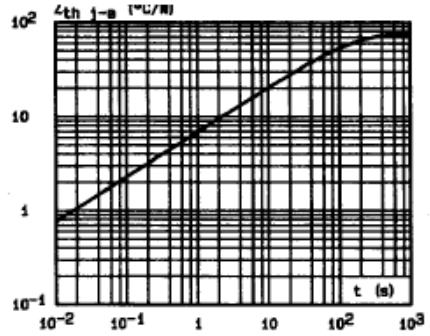


Figure 5. Peak forward current versus peak forward voltage drop (maximum values).

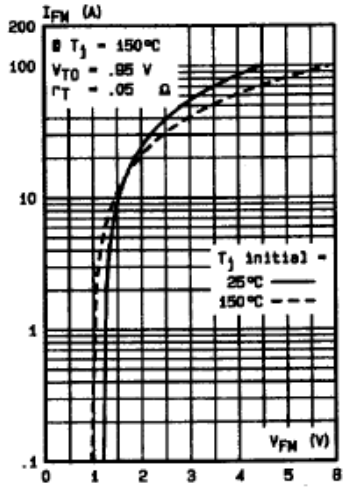


Figure 6. Capacitance versus reverse applied voltage

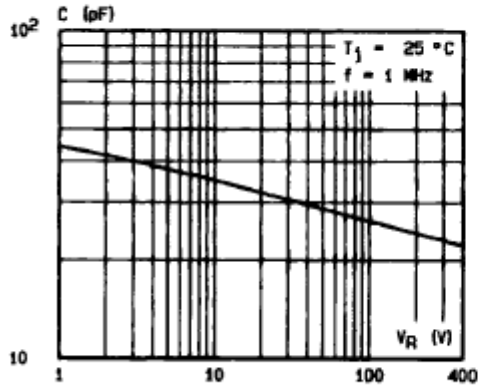
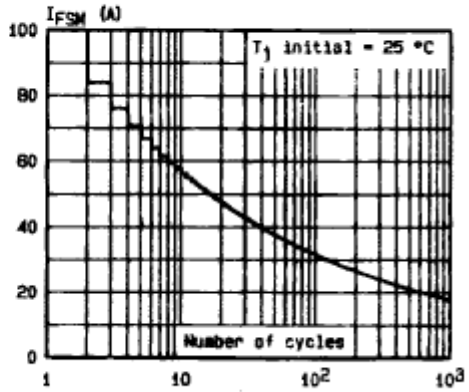


Figure 7. Non repetitive surge peak current versus number of cycles



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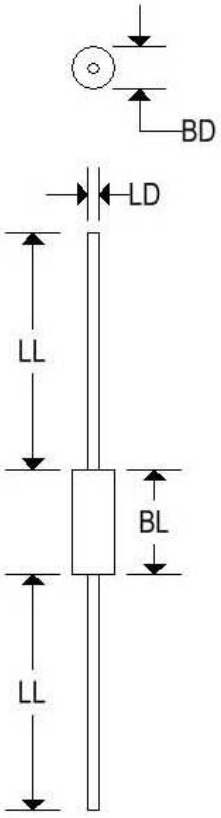
D I G I T R O N S E M I C O N D U C T O R S

BYT13-600 – BYT13-1000 FAST RECOVERY RECTIFIER DIODES

MECHANICAL CHARACTERISTICS

Case	DO-201AD
Marking	Type number, white band indicates cathode
Cooling method	By convection
Weight	1.166 grams



	DO-201AD			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.190	0.209	4.826	5.309
BL	0.285	0.375	7.240	9.530
LD	0.048	0.052	1.219	1.321
LL	1.000	-	25.400	-

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).
Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

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