

# Gallium Arsenide Schottky Rectifier

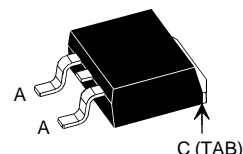
$$I_{DC} = 17 \text{ A}$$

$$V_{RRM} = 150/180 \text{ V}$$

$$t_{rr} = 14 \text{ ns}$$

## Preliminary Data

$V_{RSM}$ V	$V_{RRM}$ V	Type
150	150	DGS 20-015AS
180	180	DGS 20-018AS


**TO-263 AB**


A = Anode, C = Cathode, TAB = Cathode

Symbol	Conditions	Maximum Ratings	
$I_{DC}$	$T_C = 90^\circ\text{C}$ ;	17	A
$I_{FRM}$	$T_C = 25^\circ\text{C}$ ; (at rated $V_R$ , Sqare Wave, 20 kHz)	30	A
$I_{FSM}$	$t_p = 8.3 \text{ ms}$ ; sine	30	A
$T_{VJ}$		-55...+175	$^\circ\text{C}$
$T_{VJM}$		175	$^\circ\text{C}$
$T_{stg}$		-55...+150	$^\circ\text{C}$
$P_{tot}$	$T_C = 25^\circ\text{C}$	48	W

## Features

- Low forward voltage
- Very high switching speed – low  $I_{RM}$ ,  $t_{rr}$  values
- Soft reverse recovery
- Temperature independent switching behaviour
- High temperature operation capability

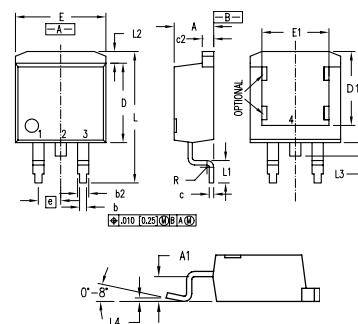
## Applications

- Switched mode power supplies (SMPS)
- High frequency converters
- Resonant converters

Symbol	Conditions	Characteristic Values		
		typ.	max.	
$V_F$	$I_F = 7.5 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$	0.8	1.0	V
	$I_F = 7.5 \text{ A}$ $T_{VJ} = 125^\circ\text{C}$	0.8		V
	$I_F = 15 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$	1.2		V
$I_R$	$V_R = \frac{1}{2} V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$	20		$\mu\text{A}$
	$V_R = \frac{1}{2} V_{RRM}$ $T_{VJ} = 125^\circ\text{C}$	100		$\mu\text{A}$
	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$		2	mA
$I_{RM}$	$V_R = 100 \text{ V}$ ; $T_{VJ} = 25^\circ\text{C} \dots 150^\circ\text{C}$	1.8		A
$t_{rr}$	$I_F = 7.5 \text{ A}$ ; $di/dt = -200 \text{ A}/\mu\text{s}$	14		ns
$R_{thJC}$			3.1	K/W
<b>Weight</b>		2		g

Data according to DIN/IEC 747 and per diode unless otherwise specified

## Outline TO-263 AB



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.06	4.83	.160	.190
A1	2.03	2.79	.080	.110
b	0.51	0.99	.020	.039
b2	1.14	1.40	.045	.055
c	0.46	0.74	.018	.029
c2	1.14	1.40	.045	.055
D	8.64	9.65	.340	.380
D1	8.00	8.89	.315	.350
E	9.65	10.29	.380	.405
E1	6.22	8.13	.245	.320
e	2.54 BSC		.100 BSC	
L	14.61	15.88	.575	.625
L1	2.29	2.79	.090	.110
L2	1.02	1.40	.040	.055
L3	1.27	1.78	.050	.070
L4	0	0.20	0	.008
R	0.46	0.74	.018	.029