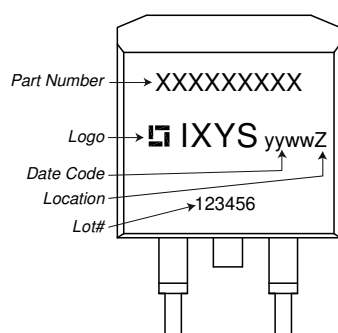


Schottky				Ratings			
Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{RSM}	max. non-repetitive reverse blocking voltage	$T_{VJ} = 25^{\circ}\text{C}$				30	V
V_{RRM}	max. repetitive reverse blocking voltage	$T_{VJ} = 25^{\circ}\text{C}$				30	V
I_R	reverse current, drain current	$V_R = 30\text{ V}$	$T_{VJ} = 25^{\circ}\text{C}$			20	mA
		$V_R = 30\text{ V}$	$T_{VJ} = 100^{\circ}\text{C}$			60	mA
V_F	forward voltage drop	$I_F = 20\text{ A}$	$T_{VJ} = 25^{\circ}\text{C}$			0.44	V
		$I_F = 40\text{ A}$				0.54	V
		$I_F = 20\text{ A}$	$T_{VJ} = 125^{\circ}\text{C}$			0.35	V
		$I_F = 40\text{ A}$				0.48	V
I_{FAV}	average forward current	$T_C = 130^{\circ}\text{C}$ rectangular $d = 0.5$	$T_{VJ} = 150^{\circ}\text{C}$			25	A
V_{F0}	threshold voltage	} for power loss calculation only		$T_{VJ} = 150^{\circ}\text{C}$		0.19	V
r_F	slope resistance					6.8	mΩ
R_{thJC}	thermal resistance junction to case					1.2	K/W
R_{thCH}	thermal resistance case to heatsink				0.25		K/W
P_{tot}	total power dissipation	$T_C = 25^{\circ}\text{C}$				105	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}; V_R = 0\text{ V}$	$T_{VJ} = 45^{\circ}\text{C}$			300	A
C_J	junction capacitance	$V_R = 5\text{ V}$ $f = 1\text{ MHz}$	$T_{VJ} = 25^{\circ}\text{C}$		1.77		nF

Package TO-263 (D2Pak)			Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal			35	A
T_{VJ}	virtual junction temperature		-55		150	°C
T_{op}	operation temperature		-55		125	°C
T_{stg}	storage temperature		-55		150	°C
Weight				1.5		g
F_c	mounting force with clip		20		60	N

Product Marking



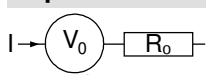
Ordering	Ordering Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DSSK48-003BS-TRL	DSSK48-003BS	Tape & Reel	800	484326
Alternative	DSSK48-003BS-TUB	DSSK48-003BS	Tube	50	484318

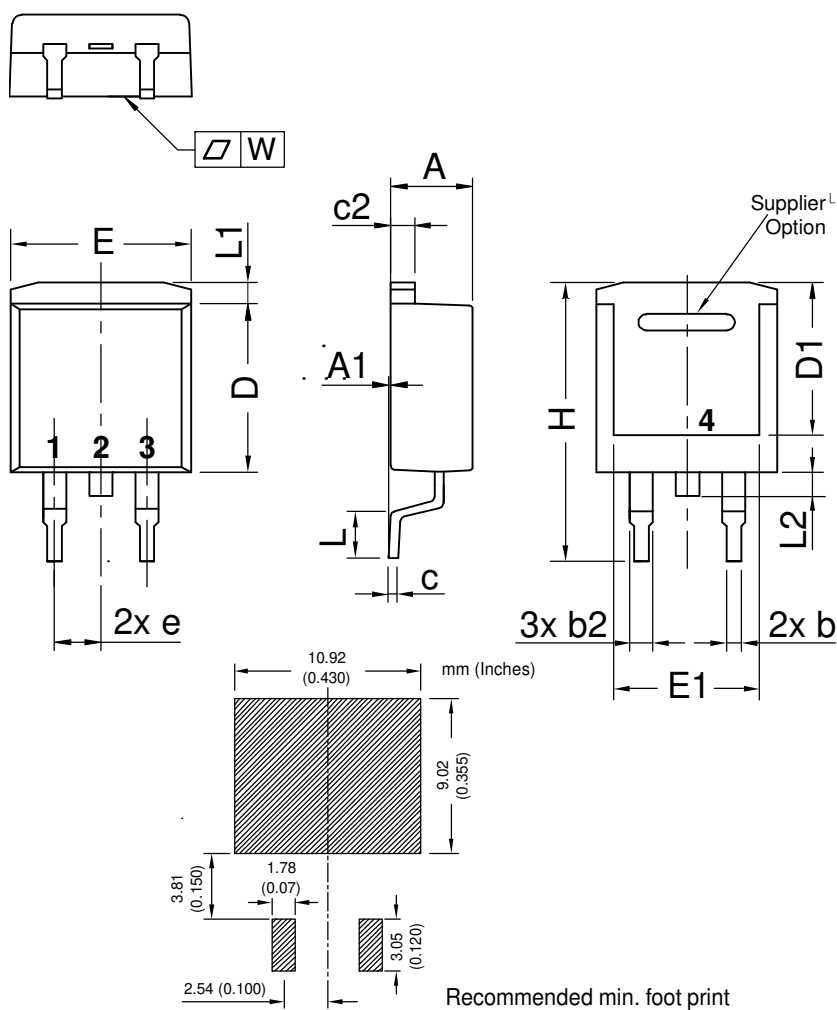
Similar Part	Package	Voltage class
DSSK48-003B	TO-220AB (3)	30
DSSK48-0025B	TO-220AB (3)	25

Equivalent Circuits for Simulation

* on die level

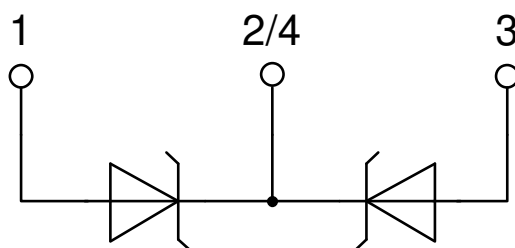
$T_{VJ} = 150^{\circ}\text{C}$

		Schottky	
$V_{0\max}$	threshold voltage	0.19	V
$R_{0\max}$	slope resistance *	3.6	mΩ

Outlines TO-263 (D2Pak)


Dim.	Millimeter		Inches	
	min	max	min	max
A	4.06	4.83	0.160	0.190
A1	typ. 0.10		typ. 0.004	
A2	2.41		0.095	
b	0.51	0.99	0.020	0.039
b2	1.14	1.40	0.045	0.055
c	0.40	0.74	0.016	0.029
c2	1.14	1.40	0.045	0.055
D	8.38	9.40	0.330	0.370
D1	8.00	8.89	0.315	0.350
D2	2.5		0.098	
E	9.65	10.41	0.380	0.410
E1	6.22	8.50	0.245	0.335
e	2.54 BSC		0.100 BSC	
e1	4.28		0.169	
H	14.61	15.88	0.575	0.625
L	1.78	2.79	0.070	0.110
L1	1.02	1.68	0.040	0.066
W	typ. 0.02	0.040	typ. 0.0008	0.002

All dimensions conform with and/or within JEDEC standard.



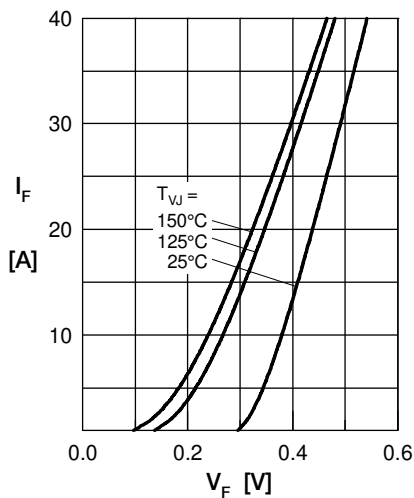
Schottky


Fig. 1 Max. forward voltage drop characteristics

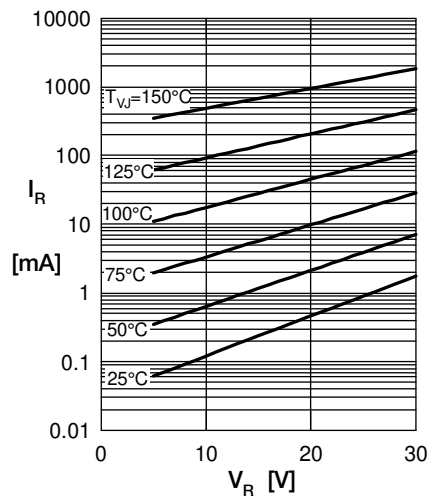


Fig. 2 Typ. reverse current I_R vs. reverse voltage V_R

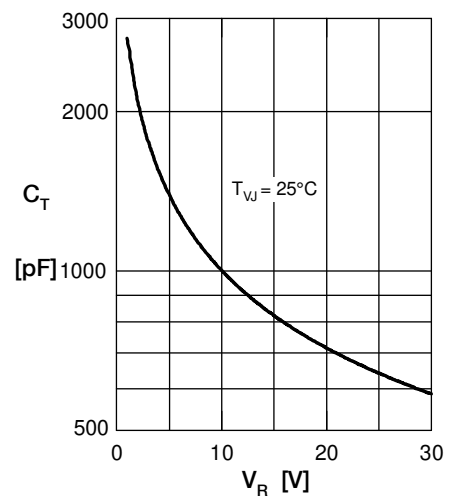


Fig. 3 Typ. junction capacitance C_T vs. reverse voltage V_R

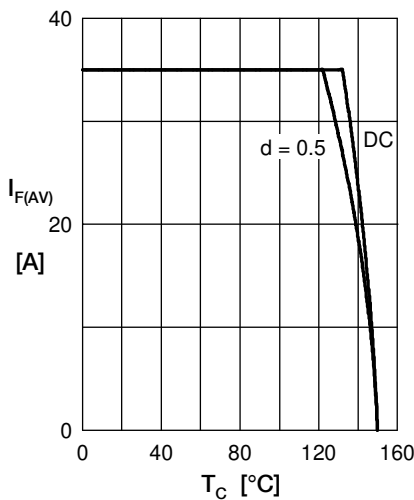


Fig. 4 Average forward current $I_{F(AV)}$ vs. case temp. T_C

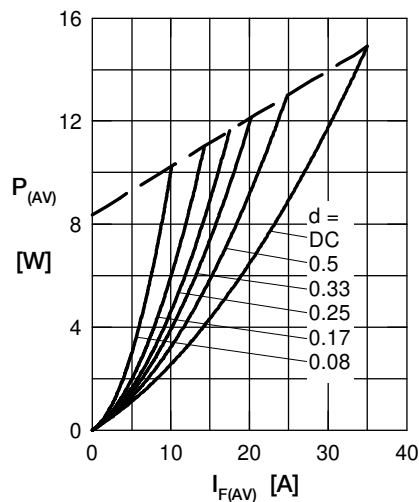


Fig. 5 Forward power loss characteristics

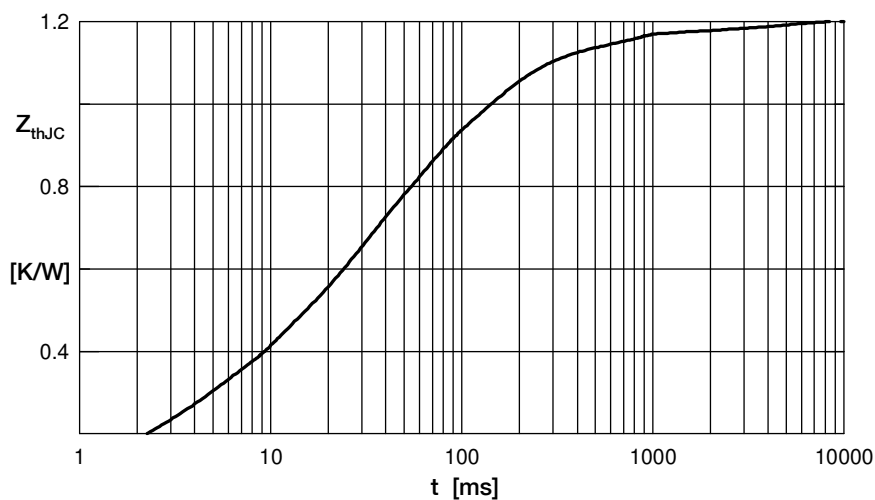


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode