

> **Features**

- High Speed Switching
- Low On-Resistance
- No Secondary Breakdown
- Low Driving Power
- High Voltage
- VGS = ± 30V Guarantee
- Avalanche Proof

> **Applications**

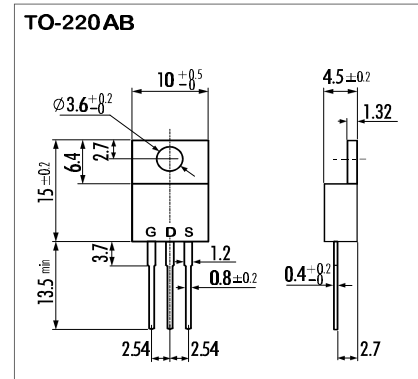
- Switching Regulators
- UPS
- DC-DC converters
- General Purpose Power Amplifier

> **Maximum Ratings and Characteristics**

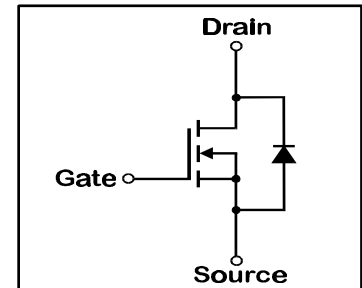
- Absolute Maximum Ratings (TC=25°C), unless otherwise specified

Item	Symbol	Rating	Unit
Drain-Source-Voltage	V _{DS}	450	V
Drain-Gate-Voltage (R _{GS} =20KΩ)	V _{DGR}	450	V
Continuous Drain Current	I _D	9	A
Pulsed Drain Current	I _{D(puls)}	36	A
Gate-Source-Voltage	V _{GS}	±30	V
Max. Power Dissipation	P _D	60	W
Operating and Storage Temperature Range	T _{ch}	150	°C
	T _{stg}	-55 ~ +150	°C

> **Outline Drawing**



> **Equivalent Circuit**



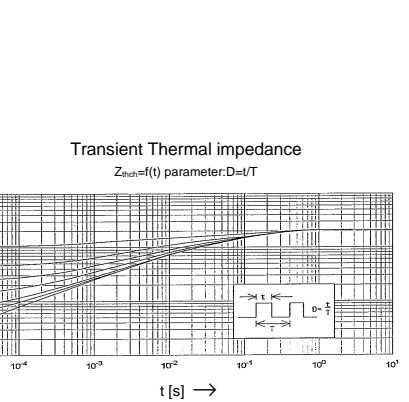
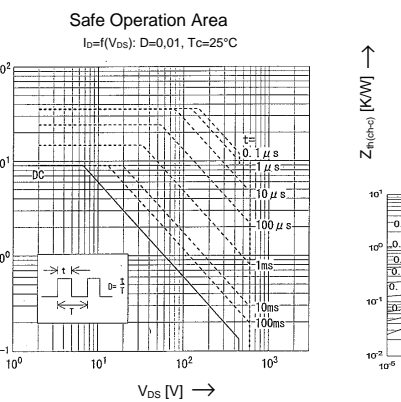
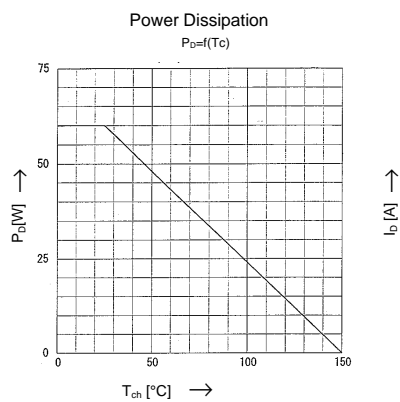
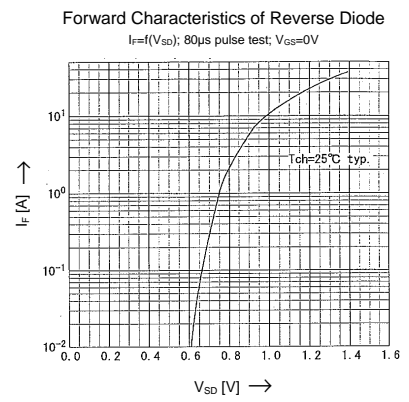
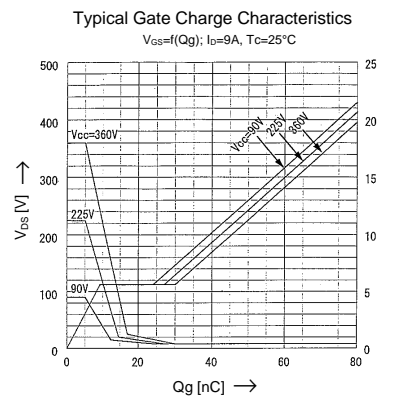
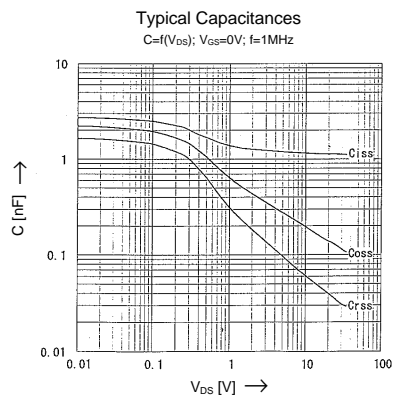
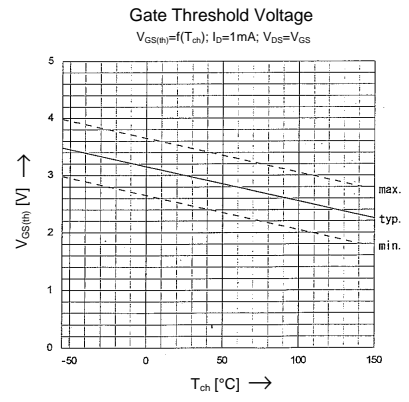
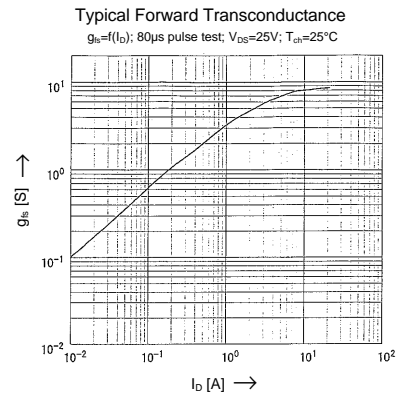
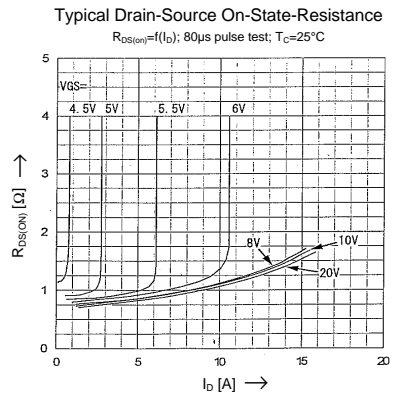
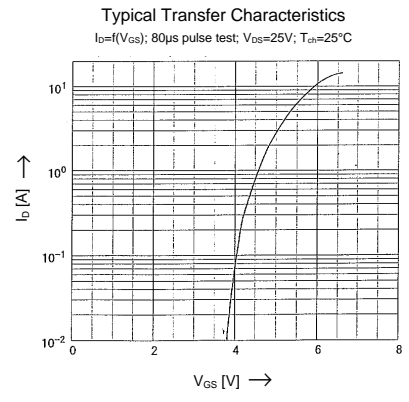
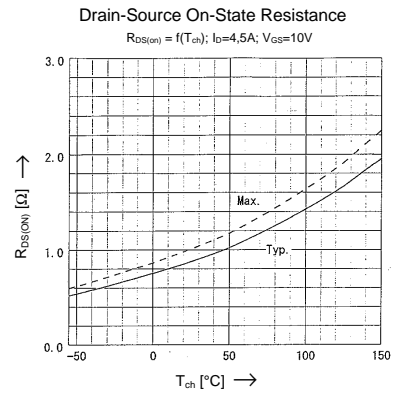
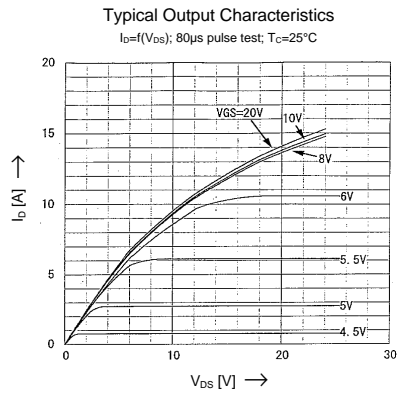
- Electrical Characteristics (TC=25°C), unless otherwise specified

Item	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown-Voltage	V _{(BR)DSS}	I _D =1mA V _{GS} =0V	450			V
Gate Threshold Voltage	V _{GS(th)}	I _D =1mA V _{DS} =V _{GS}	2,5	3,0	3,5	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =450V T _{ch} =25°C			500	μA
		V _{GS} =0V T _{ch} =125°C			1,0	mA
Gate Source Leakage Current	I _{GSS}	V _{GS} =±30V V _{DS} =0V		10	100	nA
Drain Source On-State Resistance	R _{DS(on)}	I _D =4,5A V _{GS} =10V		0,87	1,0	Ω
Forward Transconductance	g _{fs}	I _D =4,5A V _{DS} =25V	3,0	6,6		S
Input Capacitance	C _{iss}	V _{DS} =25V V _{GS} =0V		1150	1700	pF
Output Capacitance	C _{oss}	f=1MHz		130	200	pF
Reverse Transfer Capacitance	C _{rss}			50	75	pF
Turn-On-Time t _{on} (t _{on} =t _{d(on)} +t _r)	t _{d(on)}	V _{CC} =300V I _D =9A		20	30	ns
	t _r	V _{GS} =10V R _{GS} =10 Ω		50	75	ns
Turn-Off-Time t _{off} (t _{off} =t _{d(off)} +t _f)	t _{d(off)}			60	90	ns
	t _f			35	55	ns
Avalanche Capability	I _{AV}	L = 100μH T _{ch} =25°C	9,0			A
Diode Forward On-Voltage	V _{SD}	I _F =2xI _{DR} V _{GS} =0V T _{ch} =25°C		1,1	1,65	V
Reverse Recovery Time	t _{rr}	I _F =I _{DR} V _{GS} =0V		550		ns
Reverse Recovery Charge	Q _{rr}	-di _F /dt=100A/μs T _{ch} =25°C		3,9		μC

- Thermal Characteristics

Item	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Thermal Resistance	R _{th(ch-a)}	channel to air			75	°C/W
	R _{th(ch-c)}	channel to case			2,08	°C/W

> Characteristics



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