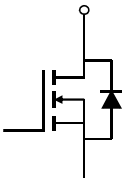
JMSH1003AE7Q

100V 2.8m N-Ch Power MOSFET

Features

Product Summary

Parameter	Value	Unit
V_{DS}	100	V
$V_{GS(th)\_Typ}$	2.7	V
I_D (@ V_{GS} = 10V) (1)	196	A
$R_{DS(ON)\_Typ}$ (@ V_{GS} = 10V)	2.8	m



Rev. 1.1

Ordering Information

Device	Package	# of Pins	Marking	MSL	T_J (°C)	Media	Quantity (pcs)
JMSH1003AE7Q-13	TO-263-7L	7	SH1003AQ	1	-55 to 175	13-inch Reel	800

Absolute Maximum Ratings (@ T_A = 25°C unless otherwise specified)

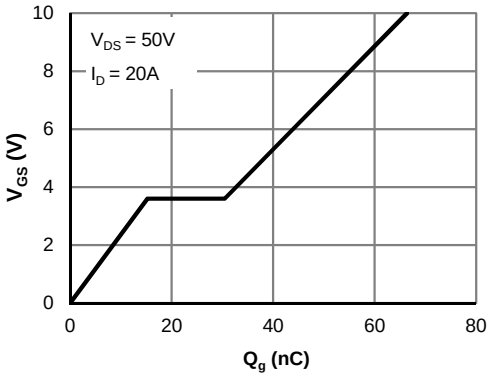
Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V_{DS}	100	V
Gate-to-Source Voltage	V_{GS}	±20	V
			A
	I_{DM}		A
Avalanche Current (3)	I_{AS}	52	A
Avalanche Energy (3)	E_{AS}	406	mJ
Power Dissipation (4) T_C = 25°C	P_D	283	W
Power Dissipation (4) T_C = 100°C	P_D	142	W
Junction & Storage Temperature Range	T_J, T_{STG}	-55 to 175	°C

$R_{DS(ON)}$ vs. V_{GS}

$R_{DS(ON)}$ (m)

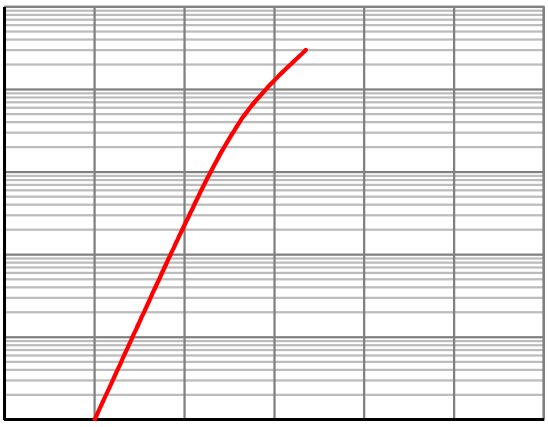
V_{GS} (V)

Gate Charge



	Symbol		Min.	Typ.	Max.	Unit
	$V_{(BR)DSS}$		100			V
		V_{DS} = 80V, V_{GS} = 0V			1.0	
		T_J = 55°C			5.0	
	I_{GSS}				±100	nA
Gate Threshold Voltage	$V_{GS(th)}$		2.0	2.7	4.0	V
	$R_{DS(ON)}$			2.8	3.5	m
	g_{FS}			85		S
	V_{SD}			0.71	1.0	V
	I_S				283	A
	C_{iss}			4398		pF
	C_{oss}			1361		pF
	C_{rss}			8.5		pF
	R_g			2.5		
	Q_g			66		nC
	Q_g			44		nC
	Q_{gs}			15.2		nC
	Q_{gd}			15.2		nC
	$t_{D(on)}$			17.2		ns
	t					

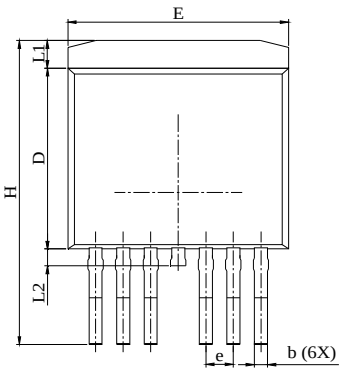
Typical Electrical & Thermal Characteristics



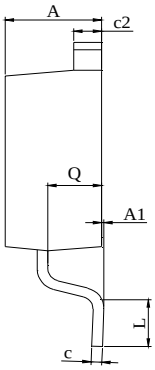
Typical Electrical & Thermal Characteristics

TO-263-7L Package Information

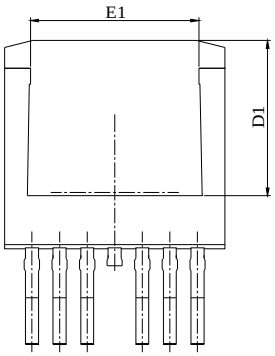
Package Outline



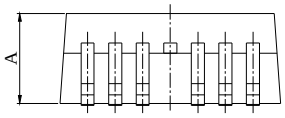
Top View



Side View



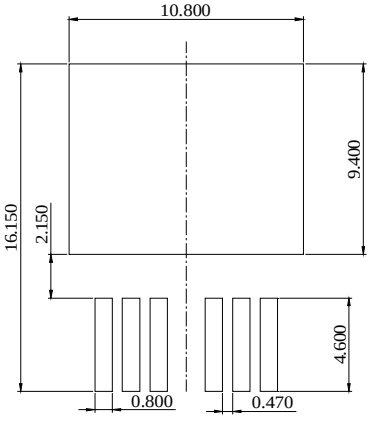
Bottom View



Front View

DIM.	MILLIMETER		
	MIN.	NOM.	MAX.
A	4.24	4.44	4.64
A1	0.00	0.10	0.25
b	0.50	0.60	0.70
c	0.40	0.50	0.60
c2	1.15	1.27	1.40
D	8.82	8.92	9.02
D1		7.65 REF.	
E	9.96	10.16	10.36
E1	6.80	7.80	8.00
e		1.27 BSC	
H	14.61	15.00	15.88
L	1.78	2.32	2.80
L1		1.36 REF.	
L2		1.20 REF.	
L3		0.25 BSC	
Q	2.30	2.48	2.70

Recommended Soldering Footprint



DIMENSIONS:MILLIMETERS